ORDER NO. MKE0508855C1

# Service Manual

## Multi Media Display

# PT-56DLX75
# PT-61DLX75

**PbF**
**Solder Lead free**

| ITEM | SPECIFICATION | 1 | 2 |
|---|---|---|---|
| DMD elements | Element Size: 0.8" (Aspect ratio: 16:9)<br>Display method: Single Chip DMD element, DLP™ system<br>No. of pixels: 921600 (1280 x 720) pixels | ○ | ○ |
| HID Lamp | 100 W HID (High Intensity Discharged) Lamp | ○ | ○ |
| Display | 56 inch, 16 : 9 aspect ratio<br>61 inch, 16 : 9 aspect ratio | ○<br>— | —<br>○ |
| Video input signal | 1.0 Vp-p, sync negative, 75 Ω terminated | ○ | ○ |
| S-Video input signal | Y (luminance signal): 1.0 Vp-p, sync negative, 75 Ω terminated<br>C (chrominance signal): burst 0.286 Vp-p, 75 Ω terminated | ○ | ○ |
| RGB input signal | Video signal: RGB Analog<br>(0.7 Vp-p, 1.0 Vp-p with sync on green, 75 Ω)<br>Sync signal: H/V separate, H/V composite<br>H-Frequency: 31.47 kHz-68.68 kHz (TTL Level)<br>V-Frequency: 56.25 Hz-85.08 Hz (TTL Level) | ○ | ○ |
| Component Video input signal | Y: 1.0 Vp-p, with sync, 75 Ω.<br>$P_B$, $P_R$: ±0.35 Vp-p, 75 Ω.<br>$YP_BP_R$ Signal:<br>480 i H-Frequency 15.73 kHz V-Frequency 29.97 Hz<br>480 p H-Frequency 31.47 kHz V-Frequency 59.94 Hz<br>720 p H-Frequency 45.00 kHz V-Frequency 60.00 Hz<br>1080 i H-Frequency 33.75 kHz V-Frequency 30.00 Hz | ○ | ○ |
| Audio input signal | 0.5 Vrms | ○ | ○ |
| Audio output signal | 0.5 Vrms | ○ | ○ |
| Speaker | 2 Speakers 30 W [15 W + 15 W] (10 % THD) | ○ | ○ |
| Tuner | ATSC digital tuner with digital cable module | ○ | ○ |

| ITEM | SPECIFICATION | 1 | 2 |
|---|---|---|---|
| Channel Capability (ATSC/NTSC) | VHF/UHF 2-69<br>Cable 1-135 | ○ | ○ |
| Input Terminals | S-Video Input: Mini DIN 4-pin<br>Video Input: RCA Pin Jack<br>RGB Input: D-Sub mini 15-pin<br>Component Video Input: 3 RCA Pin Jacks<br>HDMI Input: HDMI type A Connector<br>Audio Input: 2 RCA Pin Jacks (L-R) | ○ | ○ |
| Output Terminals | Video Output: RCA Pin Jack<br>Audio Output: 2 RCA Pin Jack (L-R)<br>Digital Audio Output: Optical Connector | ○ | ○ |
| SD Card Slot | SD Card (8 MB/ 16MB/ 32MB/ 64MB/ 128MB/ 256MB/ 512MB/ 1GB (Maximum)) | ○ | ○ |
| Power Source | AC 120 V, 60 Hz | ○ | ○ |
| Power Consumption | Power ON: Approx. 190 W (When audio is at maximum)<br>Power OFF: Approx. 0.1 W (When cooling fan is stopped with no CableCARD™) | ○ | ○ |
| Operating Conditions | Temperature: 0 °C~35 °C (32 °F~95 °F)<br>Humidity: 20 %~80 % (non-condensing) | ○ | ○ |
| Weight (Mass) | 38.6 kg (84.1 lbs.) Net<br>41.5 kg (91.5 lbs.) Net | ○<br>— | —<br>○ |
| Dimensions (W x H x D) | 1 314 mm x 954 mm x 458 mm<br>(51-3/4 inch x 37-9/16 inch x 18-1/16 inch)<br>1 424 mm x 1 029 mm x 468 mm<br>(56-1/16 inch x 40-1/2 inch x 18-7/16 inch) | ○<br>— | —<br>○ |
| **Solder** | **This model uses lead free solder (PbF).** | ○ | ○ |

1. PT-56DLX75
2. PT-61DLX75

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.

Panasonic®

**⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# CONTENTS

# 1 SAFETY PRECAUTIONS

## 1.1. GENERAL GUIDELINES

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC Plug before disassembling this unit.
3. It is advisable to use an isolation transformer in the AC supply before servicing.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations etc. are properly installed.
6. After servicing, be sure to restore the wires, leads, insulation barriers, shields, etc.
7. After servicing, make the leakage current checks to prevent the customer from being exposed to shock hazards.

**Caution:**

**Use a separate Isolation Transformer for this unit when servicing.**

## 1.2. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. For physically operated power switches, turn power on. Otherwise skip step 2.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 MΩ and 12 MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

## 1.3. LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet.

   Do not use an isolation transformer for this check.
2. Connect "A" to exposed metallic part on the set. And connect "B" to a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 kΩ/V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.25 V RMS.

   A leakage current tester (Simpson Model 228 equivalent) may be used to make the hot checks. Leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

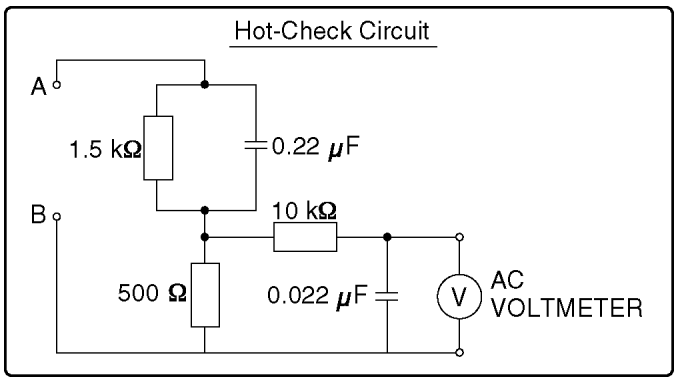



Figure 1

## 1.4. UV-PRECAUTION

1. Be sure to disconnect the AC Plug when replacing the lamp.
2. Since the lamp reaches a very high temperature during its operation, wait until it has completely cooled off when replacing the Lamp Unit.
3. The lamp emits small amounts of UV-Radiation.

   Avoid direct-eye contact by covering the Lamp and wearing the UV protective glasses.
4. The high pressure lamp involves a risk of explosion.

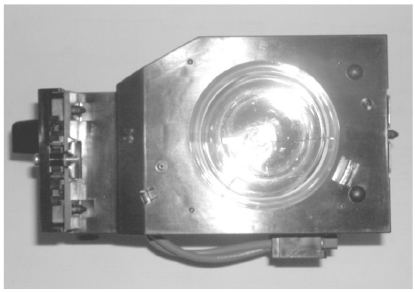


Figure 2

This product has a High Intensity Discharge (HID) lamp that contains a small amount of mercury. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org.>

## 1.5. TEMPERATURE DETECTION FOR THE LAMP UNIT

This projector has bimetal (Thermostat) contacting the lamp unit to protect the lamp. If the temperature of the lamp exceeds 120 °C, the bimetal will operate to turn off the power.

The installed position of the bimetal is shown in the illustration.

To recover the bimetal from its off state, press the protrusion of the bimetal unit until hear click.

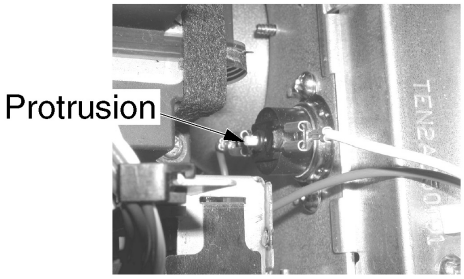



Figure 3

# 2 PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistorsandsemiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap,whichshould be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparableconductivematerial).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   **CAUTION :**

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD)sufficientto damage an ES device).

# 3 ABOUT LEAD FREE SOLDER (PbF)

**Distinction of PbF PCB:**

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)


Printed case

**CAUTION:**

- Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 50 °F - 70 °F (30 °C - 40 °C) higher.
  Please use a soldering iron with temperature control and adjust it to 700 °F±20 °F (370 °C± 10 °C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100 °F/600 °C).
- All products with the printed circuit board with PbF stamp or printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

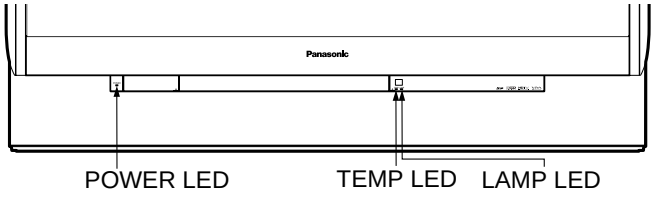
**Recommendations**

Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

# 4 SERVICE NOTES

## LED INDICATIONS FOR ERROR CONDITION

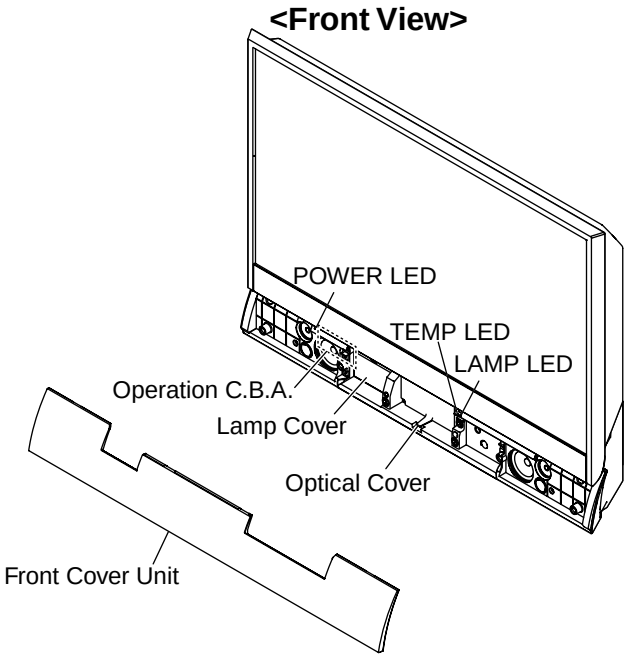
Each LED indication facilitates finding the cause of an error.
When an error is detected, the Lamp turns off and an LED on the front will flash.

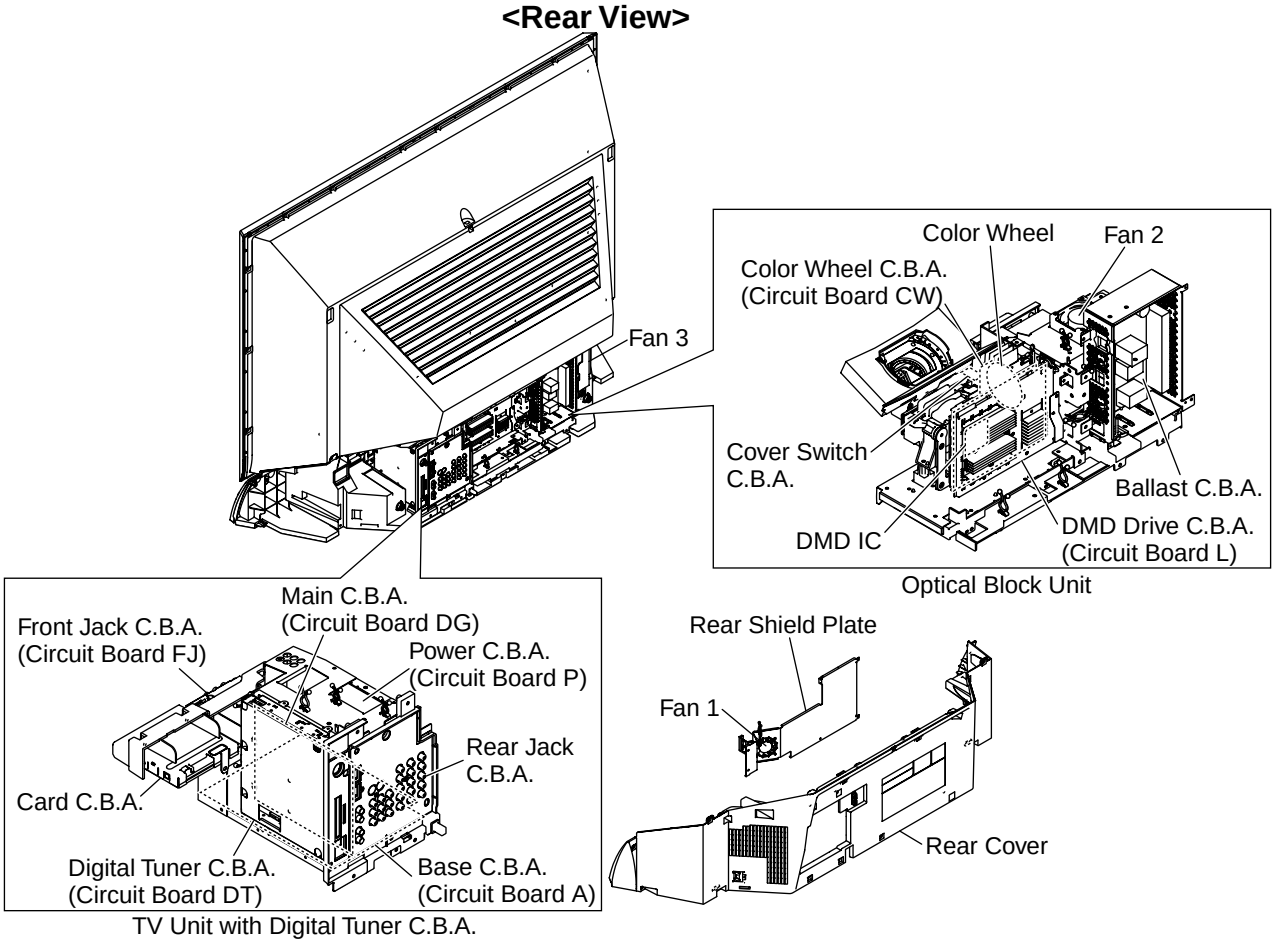



| Error No. | Error Information | POWER LED | TEMP LED | LAMP LED | SOS (Note 1, 3) | LAMP OFF (Note 2) | RESET |
|---|---|---|---|---|---|---|---|
| 1) | SOS2 (Over Voltage) | flashes orange once every 5 seconds | - | - | H10SOS2 | ○ | AC ON/OFF |
| 2) | Fan1, Fan2 or Fan3 stopped | flashes orange twice every 5 seconds | - | - | H20FANST | ○ | |
| 3) | Abnormal Voltage (+9V line) | flashes orange 3 times every 5 seconds | - | - | H30DT9V | ○ | |
| 4) | Abnormal Voltage (+3.3V line) | flashes orange 4 times every 5 seconds | - | - | H40 3.3V | ○ | |
| 5) | IC4265 (GC4U) communication Error | flashes orange 5 times every 5 seconds | - | - | H50GC4U | ○ | |
| 6) | Abnormal Color Wheel rotation | flashes orange 6 times every 5 seconds | - | - | H60CWSTP | ○ | |
| 7) | Abnormal Temperature | - | flashes twice every 1 second | - | - | ○ | Power ON/OFF |
| 8) | Abnormal Lamp | - | - | flashes twice every 1 second | - | ○ | |
| 9) | IC6004 (DMD Control) ASIC READY is incomplete | flashes orange 8 times every 5 seconds | - | - | H80ASCRY | ○ | |

**Note:**
1. When more than one error has occurred at the same time in SOS (Error), the POWER LED will flash one pattern only according to priority 1) 3) 2) 4) 5) 6) 9).
2. LAMP OFF: The LED will flash immediately after the Lamp goes off.
3. The detected SOS (Error 1)~6), 9)) data will be stored in the EEPROM.

## MAIN PART LOCATIONS



# REPLACEMENT OF LAMP

## Lamp Time Reset Procedure:

Be sure to reset the Lamp time to "0" after replacing with the new Lamp.

1. Plug in the AC Cord, and turn on the power by pressing the POWER button.
2. Press and hold the **VOLUME DOWN button on the unit and the SPLIT key on the remote** together for over 5 seconds in power on condition.
   When the reset is finished, the display as shown in Fig. 5-1 appears and the LAMP LED goes out.


Fig. 5-1

**Note:**

1. The unit will detect when the Lamp's end of life is approaching and the following message will be displayed. And the LAMP indicator light will be lit when the Lamp's end of life is approaching.

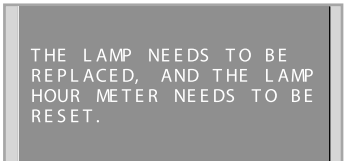



Fig. 5-2

2. Influences of frequent lighting, continuous light use for over 24 hours, the number of times lit, the length of time between lightings, etc. may shorten lamp life. (Because of this, we recommend having a replacement lamp on hand.)

**WARNING:**

- The lamp could rupture if dropped and lamp fragments could cause injury.
- Because the lamp unit is hot immediately after its use, touching it may cause burns.
  Please allow the lamp to cool before handling or replacing the lamp unit.
- If replacement of the lamp unit becomes necessary during the operation of the Projection Display, follow the procedure to turn off the power and wait until the lamp unit cools completely.

**Cautions for Lamp Unit Replacement:**

- Do not disassemble the Lamp.
- The lamp may be hot. Be careful when handling. Wear gloves.
- Under no circumstance should you touch the actual bulb. At this high operating temperature the natural oil on your finger can cause the glass to weaken where touched and the bulb can crack or explode.

## Lamp Replacement Procedure:

1. Press the POWER button to turn off the power.
2. Wait for about 1 minute until the cooling fan stops.
   **Note:**
   The lamp cooling fan will continue to operate for about 1 minute after the power is turned off. Do not unplug the AC Cord from the outlet until the fan has stopped. Avoid interrupting the power by using circuit breakers or switchable power strips.
3. After the cooling fan has stopped, unplug the AC Cord from the outlet.
   **Note:**
   Please wait more than one hour before replacing the lamp.
   **[ Forced cooling function ]**
   **If you need to replace the lamp more urgently:**
   - The Projection display has a forced cooling feature. After the POWER button is turned OFF, and during the first minute of normal cooling fan operation, press the VOLUME UP button on the unit and CH UP key on the remote at the same time for more than 5 seconds. The cooling fan operates for about 10 minutes. (LAMP LED will flash 5 times every 5 seconds and the POWER LED will flash red for 10 minutes.)
4. Remove the Front Cover Unit from the latches.
5. Turn the Knob to the left.

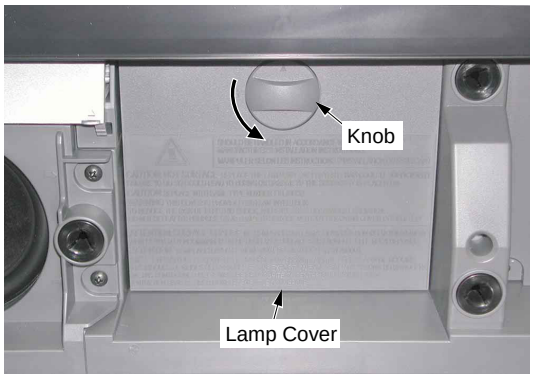



Fig. 5-3

6. Pull the Lamp Cover out.
7. Loosen the Screw on the Lamp. Then, pull the Lamp.
   **Note:**
   Because the Lamp may still be hot, use caution when handling.

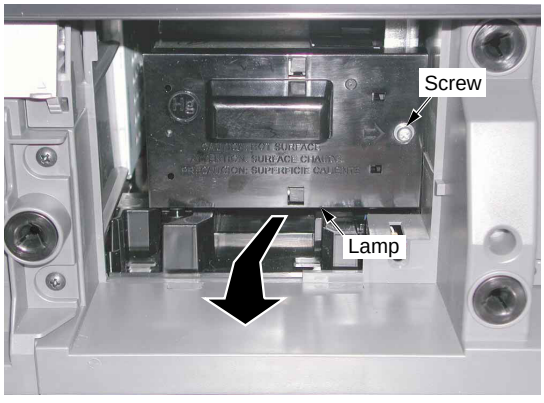



Fig. 5-4

8. Install the new Lamp, and tighten the Screw.
9. Install the Lamp Cover, and turn the Knob to the right.
10. Install the Front Cover Unit.

**Note:**
After replacing the Lamp, be sure to reset the Lamp time.

# CLEANING METHODS

### THE SCREEN UNIT AND THE MIRROR

**- THE SCREEN UNIT (Lenticular Screen, Fresnel Lens)**

It is strongly recommended that the Lenticular Screen surface (outside) and the Fresnel Lens surface (inside) should be wiped gently with a clean, soft, dry cloth to remove any dirt.

**Note:**

1. If the dirt cannot be removed by wiping with a clean, soft, dry cloth, use a clean, soft, dry cloth moistened with diluted neutral pH liquid cleanser or a lens cleaner (usually containing a small amount of ethyl alcohol) and wipe lightly. Take care not to leave any streaks.
   Do not use cleaning materials containing methyl alcohol, acetone, or dichloromethane.
2. Use an air blower to clean the inner surface of the Lenticular Screen and the outer surface of the Fresnel Lens (between the two surfaces). These surfaces must not be wiped with a cloth.

**- THE MIRROR**

Remove any dirt with an air blower or wipe with a clean, soft, dry cloth. If wiped too forcefully, the surface of the Mirror can be damaged. If wiping with a clean, dry cloth does not remove the dirt, the Mirror must be replaced.

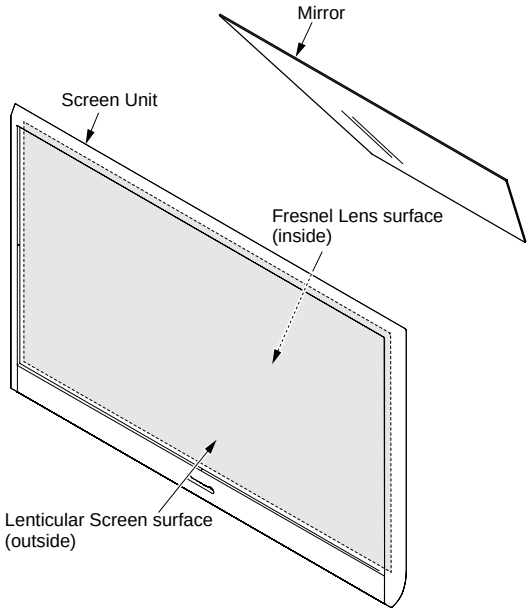



Fig. 6-1

### THE LAMP

Gently wipe the glass surface of the Lamp with cleaning paper or soft cloth.

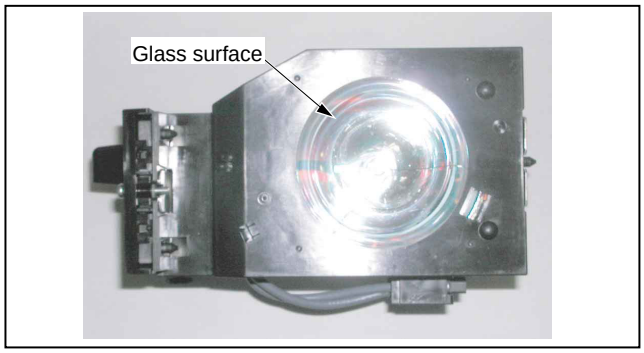



Fig. 6-2

### THE PROJECTION LENS

Use lens cleaning paper and cleaner available at your local camera shop, etc. Dampen the cleaning paper with cleaner and gently wipe the surface of the lens from the center outward to remove dust.

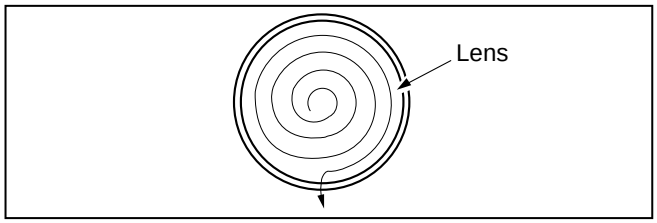



Fig. 6-3

### THE COLOR WHEEL UNIT

1) Use an air blower to clean the Color Wheel.
2) If any dirt remains, the Color Wheel surface should be wiped gently with a clean, soft, dry cloth to remove any dirt.

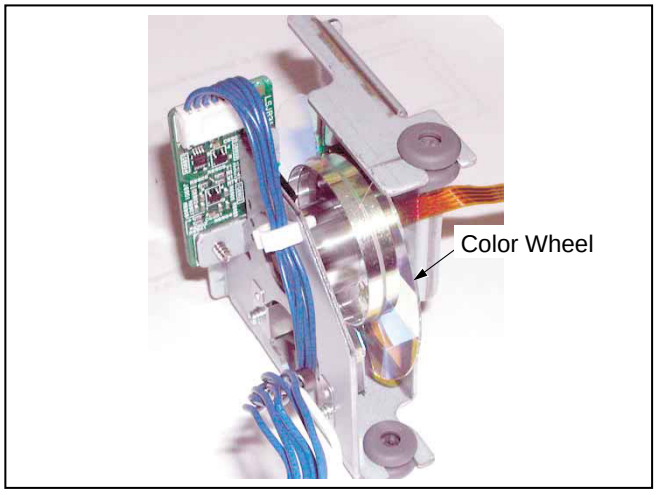



Fig. 6-4

## WHEN AND HOW TO COPY EEPROM DATA FROM L BOARD TO DG BOARD

The table below shows when it is necessary to copy the "Color Wheel Index Delay" and "White Balance" adjustment data stored in the EEPROM IC on the DMD Drive C.B.A. (Circuit Board L) to the EEPROM IC on the Main C.B.A. (Circuit Board DG). After replacing the corresponding parts, copying must be done using "EEP COPY L->DG" in Factory Adjust Mode at the user's location.

When replacing the following parts, copying is necessary.

| | | |
|---|---|---|
| **Replacement Parts or Substitution from another set** | TV Unit (Ref No. 25) | ○ |
| | Main C.B.A. (Circuit Board DG) (Ref No. E10) | ○ |
| | Optical Block Unit (Ref No. 21) | ○ |
| | IC1101 (EEPROM) | ○ |

**Note:**

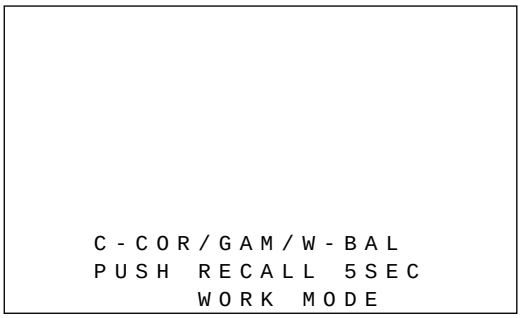
1. When re-installing the original parts, copying is not necessary.
2. The "Color Wheel Index Delay" and "White Balance" data stored in EEPROM IC on the DMD Drive C.B.A. (Circuit Board L) is adjusted at the factory.

(For reference)
When replacing the following parts, copying is not necessary.

| | | |
|---|---|---|
| **Replacement Parts or Substitution from another set** | Base Body Unit (Ref No. 40) | × |
| | Color Wheel Unit (Ref No. 245) | × |
| | DMD Drive C.B.A. (Circuit Board L) (Ref No. E110) | × |
| | IC6014 (EEPROM) | × |
| | DMD IC (Ref No. IC6012) | × |
| | Digital Tuner C.B.A. (Circuit Board DT) (Ref No. E10) | × |
| After "Color Wheel Index Delay" adjustment or "White Balance" adjustment: | | × |

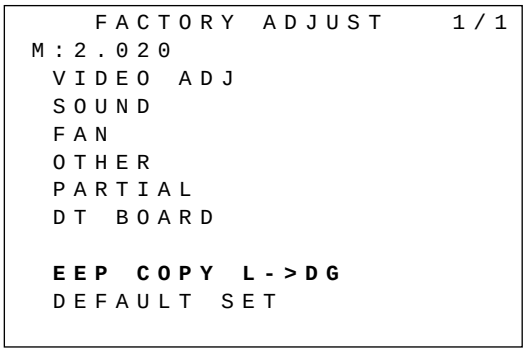
**How to copy data:**

1) Turn the power on.
2) To enter Work Mode, press and hold the VOLUME DOWN button on the unit and the RECALL key on the remote for more than 5 seconds in power on condition.



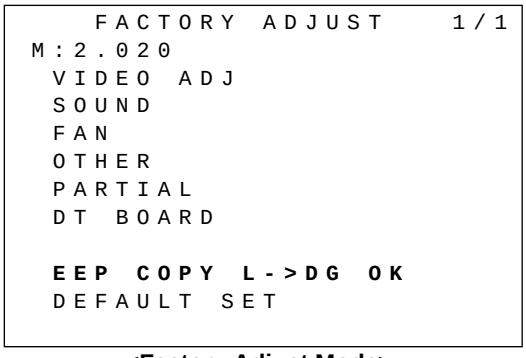

**< Work Mode >**

3) To enter Factory Adjust Mode, press and hold the VOLUME DOWN button on the unit and SWAP key on the remote for more than 1 second.
4) Press the CH UP/DOWN key on the remote to select "EEP COPY L->DG" on menu.




**<Factory Adjust Mode>**

5) Press the OK key for more than 3 seconds. "OK" will appear for 5 seconds. The adjustment data of the Optical Block Unit will copy to the EEPROM IC on the Main C.B.A. (Circuit Board DG).

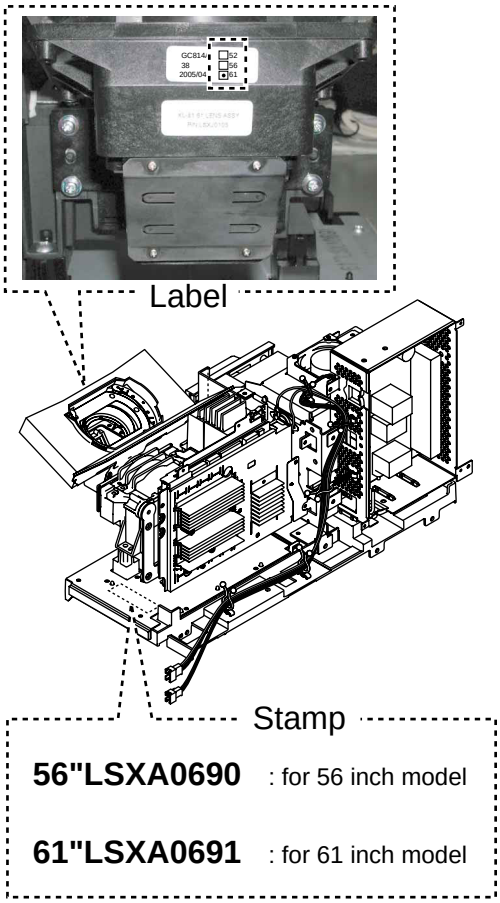



**<Factory Adjust Mode>**

6) Display the internal pattern for "Color Wheel Index Delay" in Factory Adjust Mode.
   If required, perform the "Color Wheel Index Delay" adjustment.
7) Check the white balance on the screen. If NG, perform the "White Balance" adjustment.

## TO DISTINGUISH THE PROJECTION LENS UNIT OR THE OPTICAL BLOCK UNIT

The only difference between the 56 inch model and the 61 inch model of the Optical Block Unit is the Projection Lens. To distinguish between models, see the label on the Projection Lens or the stamp on the Frame Plate of the Optical Blcok Unit.



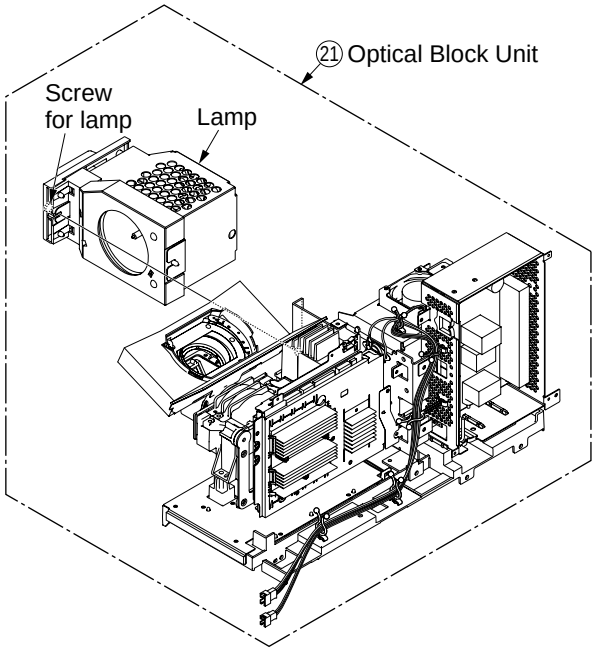

## RESET USER'S MEMORY FUNCTIONS

Be sure to reset the user's memory:
- After replacing the Digital Tuner C.B.A. (Circuit Board DT)
- If the secret code of V-chip is forgotten.
- When moving the unit to a new location.

1. Turn on the power.
2. Press and hold the VOLUME DOWN button on the unit and the OK key on the remote for more than 3 seconds. When reset is finished, power shuts off automatically (the user's memory is reset).

## BEFORE REMOVING THE OPTICAL BLOCK UNIT FROM THE UNIT AT THE USER'S LOCATION

When removing the Optical Block Unit, remove the Lamp from the Optical Block Unit and keep it. Then, reinstall this Lamp into the new Optical Block Unit.




## DO NOT UNPLUG AC CORD DURING COOLING OPERATION

The lamp cooling fan will continue to operate for approximately 1 minute after the power is turned off, and at the same time, the POWER LED will flash red.
Do not disconnect the AC Cord from the power outlet and do not open any circuit breakers while the cooling fan is operating.

## HOT CIRCUIT

Primary circuits exist on the Ballast C.B.A. and the Power C.B.A. (Circuit Board P).
This circuit is identified as "**HOT**" on the C.B.A. and in the Service Manual. Use extreme care to prevent accidental shock when servicing.

## MODEL NO. IDENTIFICATION MARK

Use the Marks shown in the chart below to distinguish between the different models included in this Service Manual.

| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |
| NOT USED | PT |

**Note:**
Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for mark "PT."

## BEFORE REMOVING THE MAIN C.B.A. (CIRCUIT BOARD DG) OR THE TV UNIT FROM THE UNIT AT THE USE'S LOCATION

**Note:**
The TV Unit includes the Main C.B.A. (Circuit Board DG).

**CAUTION:**
1. **Be sure to make a note of the CURRENT LAMP value (value A) in Service Mode (1/4):**

```
SERVICE Mode              1/4

 LAMP OPERATION TIME

  CURRENT LAMP:    2000h ←Value A
OSD DISP         :      ON  (Changeable)
LON COUNT        :     153
BKSV:   B0 3A 59 CD 66
```

**<Service Mode (1/4)>**

LAMP OPERATION TIME is stored in EEPROM on the Main C.B.A. Therefore, before removing the Main C.B.A. or the TV Unit at the user's location, make a note of the CURRENT LAMP value (value A) in Service Mode (1/4). Then, after installing the new Main C.B.A. or the TV Unit at the user's location, set the CURRENT LAMP value to the original value (value A) in Service Mode.
Otherwise, OSD and LED Lamp replacement indications will be displayed at the wrong time.

**Note:**
**In case it is impossible to make a note of the CURRENT LAMP value** because of a defective Main C.B.A., ask the customer their daily average use and the approximate age of the current Lamp. Then, calculate the CURRENT LAMP value as follows and make a note.

| Daily average use (hours) | X | Approx. age (days) | = | **CURRENT LAMP** (hours) |
|---|---|---|---|---|

**Note:**
The TOTAL value can be set to the original value in Service Mode (2/4) by similar method:
Before removing the Main C.B.A. at the user's location, make a note of the TOTAL value in Service Mode (2/4). Then, after installing the new Main C.B.A. at the user's location, set the TOTAL value to the original value in Service Mode.

## WHEN INSTALLING THE MAIN C.B.A. (CIRCUIT BOARD DG) OR THE TV UNIT INTO THE UNIT AT THE USER'S LOCATION

**CAUTION:**
1. Set CURRENT LAMP value to original value as follows.
   1) Select CURRENT LAMP in Service Mode (1/4).
   2) Press the VOLUME UP/DOWN key on the remote to change to the original value (value A) that was noted before removing the Main C.B.A. or the TV Unit at the user's location.

```
SERVICE Mode              1/4

 LAMP OPERATION TIME

  CURRENT LAMP:    2000h ←Value A
OSD DISP         :      ON  (Changeable)
LON COUNT        :     153
BKSV:   48 BF 9D 72 B5
```

**<Service Mode (1/4)>**

### Service Mode Map

**Enter :**
VOLUME DOWN button + TV/VIDEO key
(on the front) (on the remote)
(for more than 5 seconds in power off condition)

Power ON

```
SERVICE MODE          1/4

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h
 OSD DISP     :      ON
 LON COUNT    :     153
 BKSV:  B0 3A 59 CD 66
```

**< Service Mode (1/4) >**

CH DOWN key / CH UP key

```
SERVICE MODE          2/4
                IR:1 UNIT:1
 IC1105:1 3001:1 3002:1
   3003:1 4004:1 4257:1
   4258:1 4265:1 6004:1
   6904:1 SAP :1
  TOTAL        : 12345h
 IC1101:1 6014:1 MTNR:1
                E:05071401

 IC1102       V:0202000
```

**< Service Mode (2/4) >**

CH DOWN key / CH UP key

```
SERVICE MODE          3/4
 IC1102 PORT
P0:11111001  P8:---11110
P1:--0000000 P9:---111111
P2:00000000  PA:00000100
P3:00000000  PB:11111110
P4:--011010  PC:11111111
P5:11110101  PD:------110
P6:10000010  PE:00000100
P7:11001100  PF:----1111
```

**< Service Mode (3/4) >**

CH DOWN key / CH UP key

```
SERVICE MODE          4/4
-SOS-
 LAST SOS    H10SAFE 01
 SAFE 10.40.50.50.40
 H10SOS2 :01 H20FANST:00
 H30DT9V :00 H40 3.3V:01
 H50GC4U :01 H60CWSTP:00
 H70LAMCV:00 H80ASCRY:00
-DDP1101-
 STATUS READ
          20980E33210A
```

**< Service Mode (4/4) >**

CH DOWN key

## WIRE AND LEAD POSITION DIAGRAM OF THE UNIT

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.
**Note:** Use extreme care especially for the following.

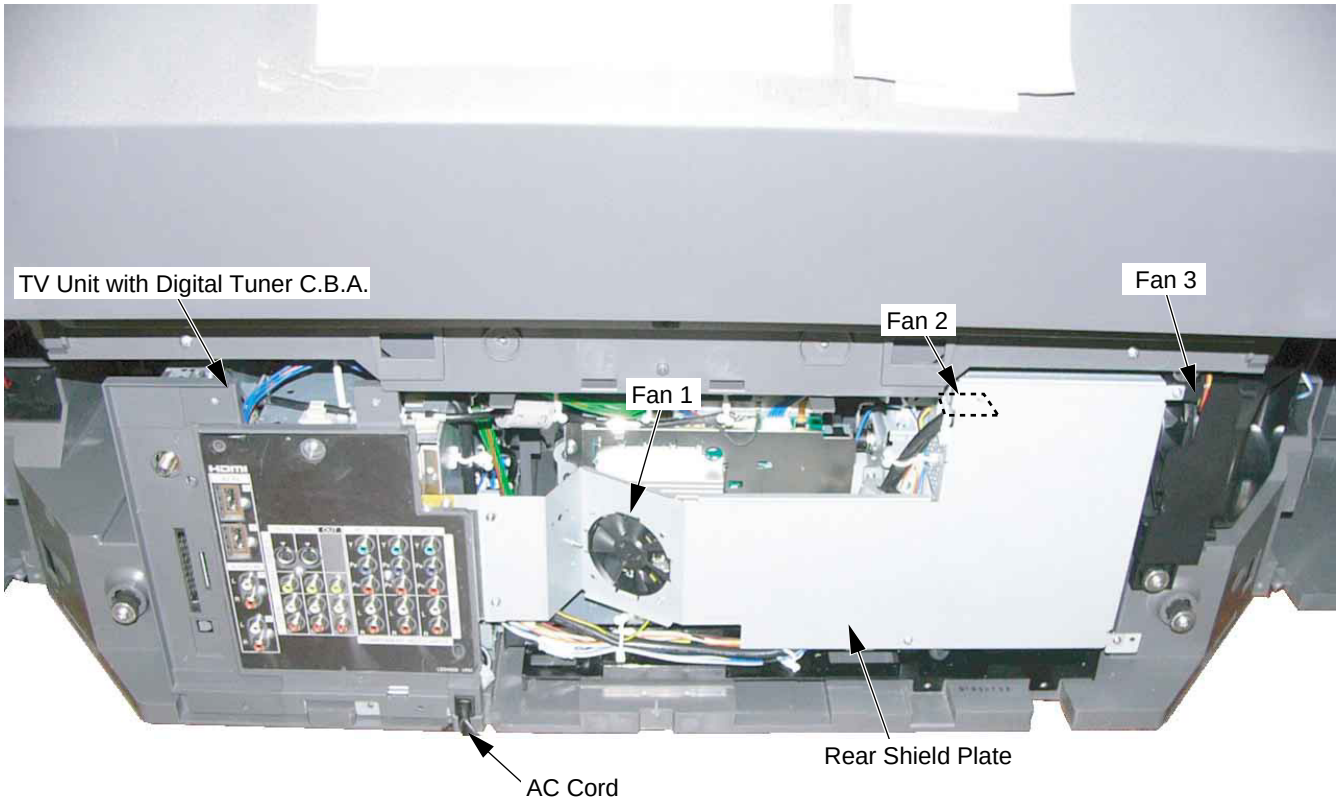



Fig. 9-1

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.
**Note:** Use extreme care especially for the following.

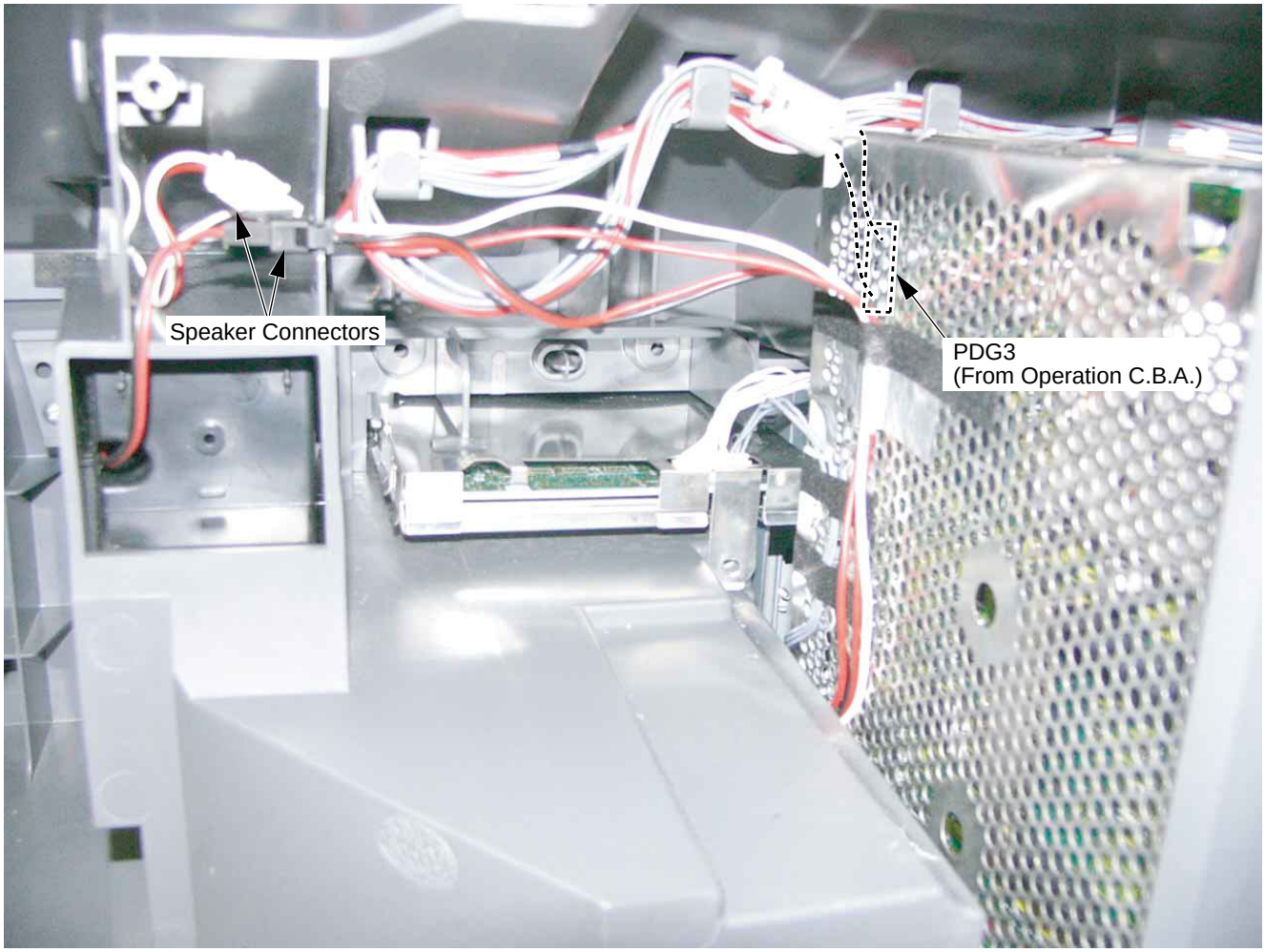
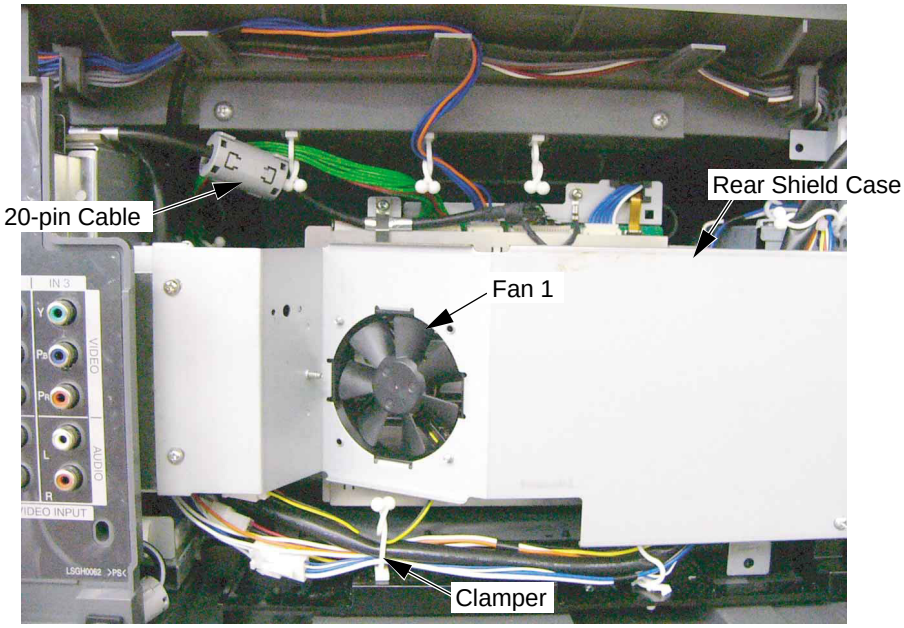
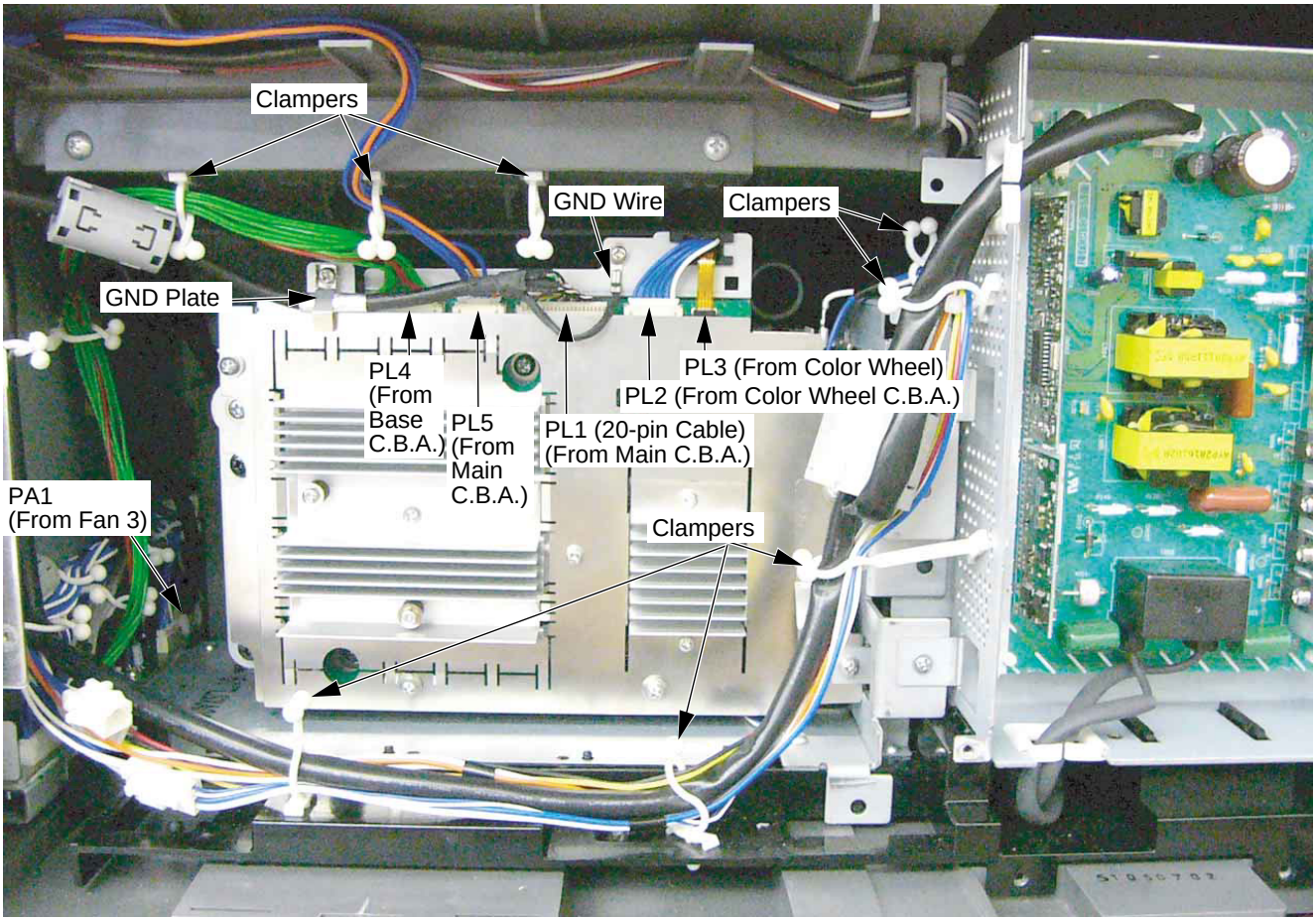



Fig. 9-2

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

**Note:** Use extreme care especially for the following.




**<With Rear Shield Case and Fan 1 removed>**

Fig. 9-3

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

**Note:** Use extreme care especially for the following.

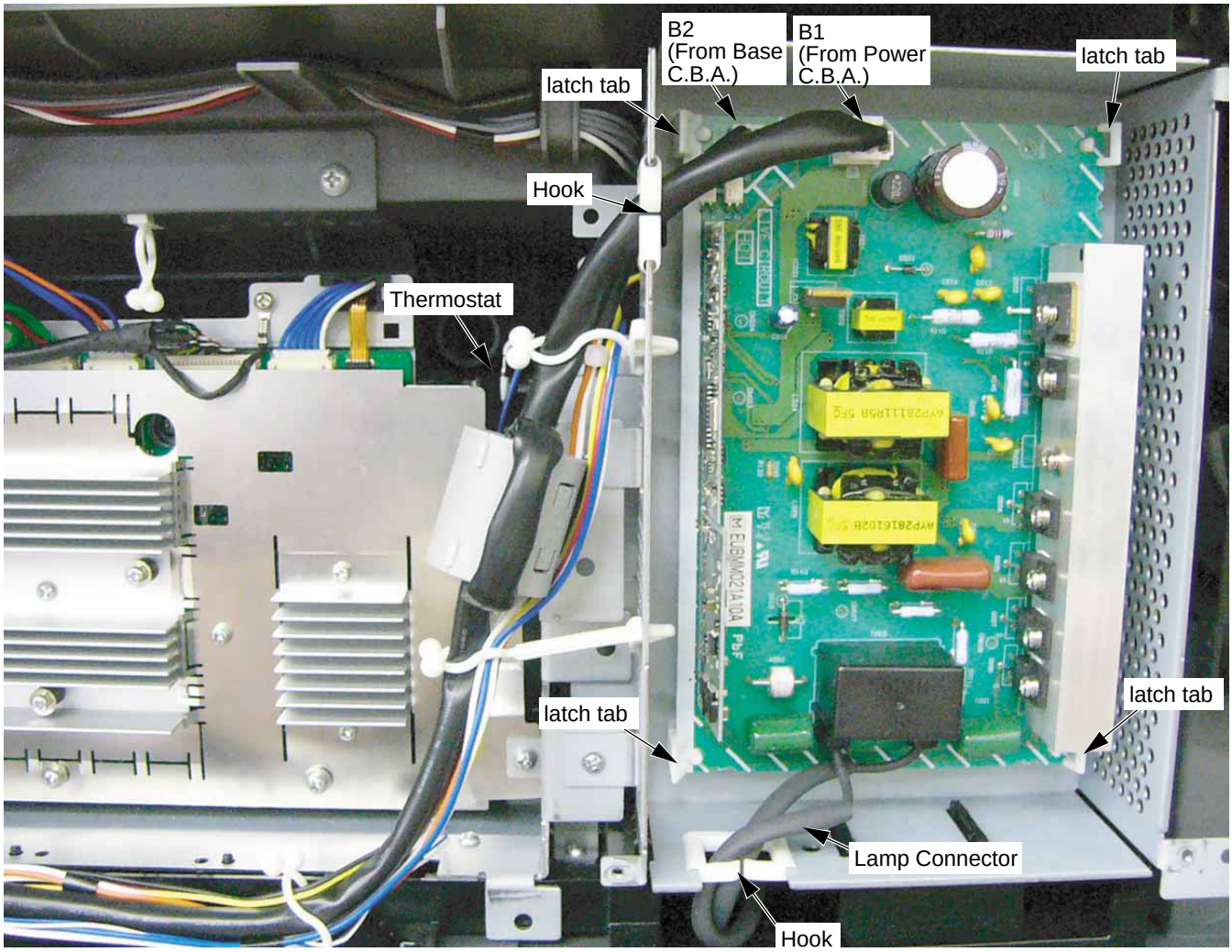
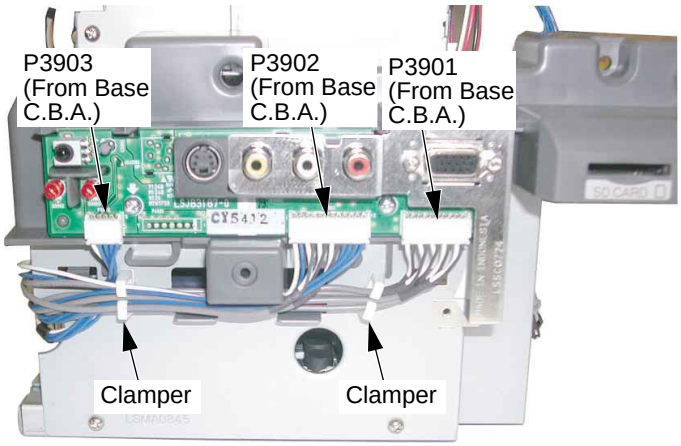
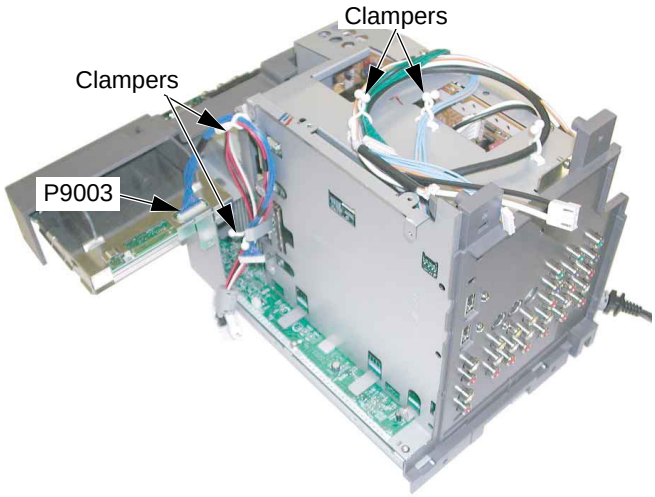



Fig. 9-4

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

**Note:** Use extreme care especially for the following.



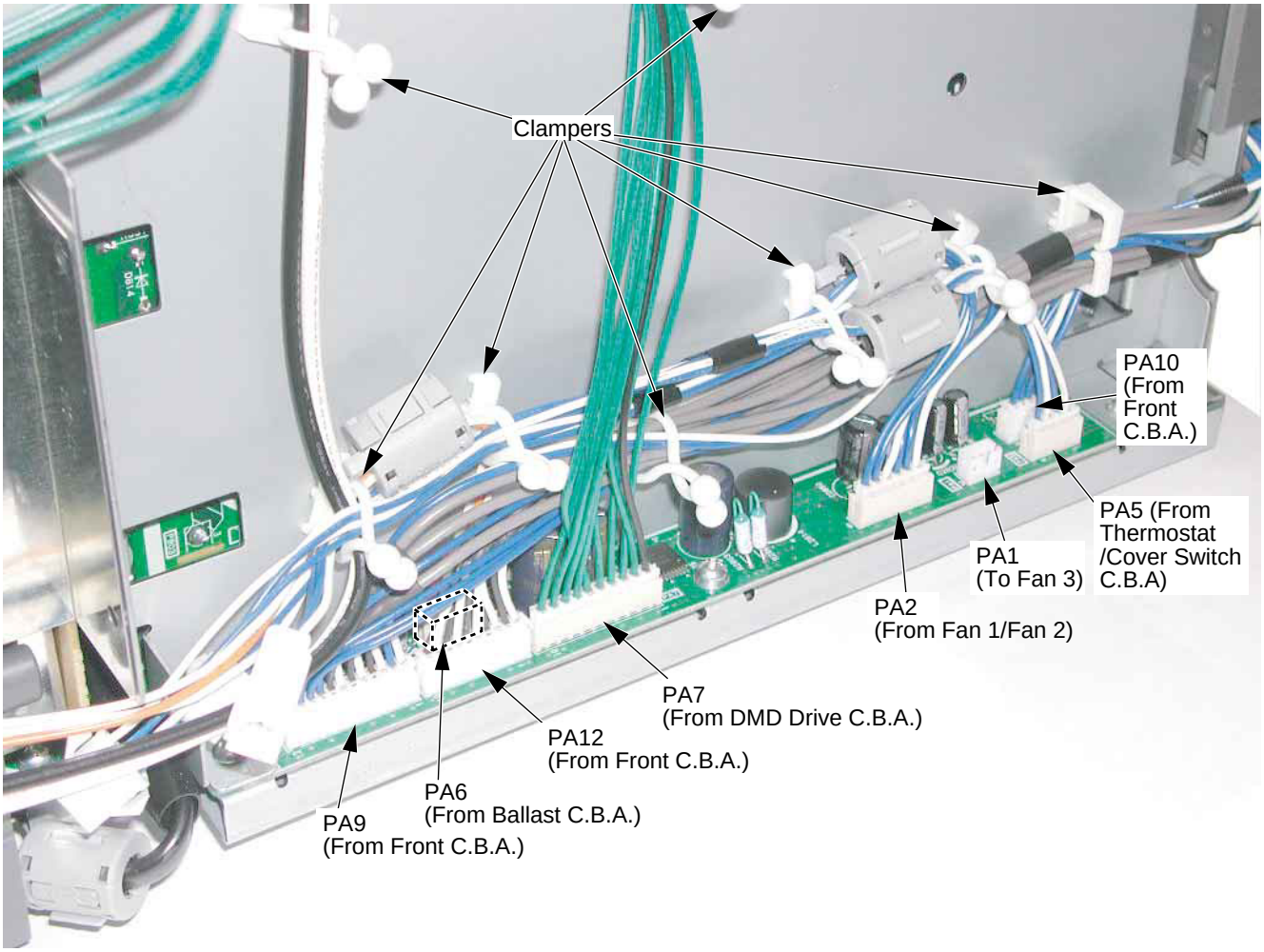




Fig. 9-5

# 5 DISASSEMBLY/ASSEMBLY PROCEDURES

## 5.1. CABINET SECTION

## CABINET SECTION

### DISASSEMBLY METHOD OF CABINET SECTION

**Cabinet section contains following removal procedures:**

**REMOVAL OF THE OPTICAL BLOCK UNIT FROM THE CABINET**

**REMOVAL OF THE TV UNIT FROM THE CABINET**

**REMOVAL OF THE BASE BODY UNIT**

**REMOVAL OF THE BALLAST C.B.A.**

**REMOVAL OF THE FRONT JACK C.B.A. (CIRCUIT BOARD FJ), THE CARD C.B.A., THE REAR JACK C.B.A., THE POWER C.B.A. (CIRCUIT BOARD P), THE MAIN C.B.A. (CIRCUIT BOARD DG) AND THE BASE C.B.A. (CIRCUIT BOARD A) FROM THE TV UNIT**

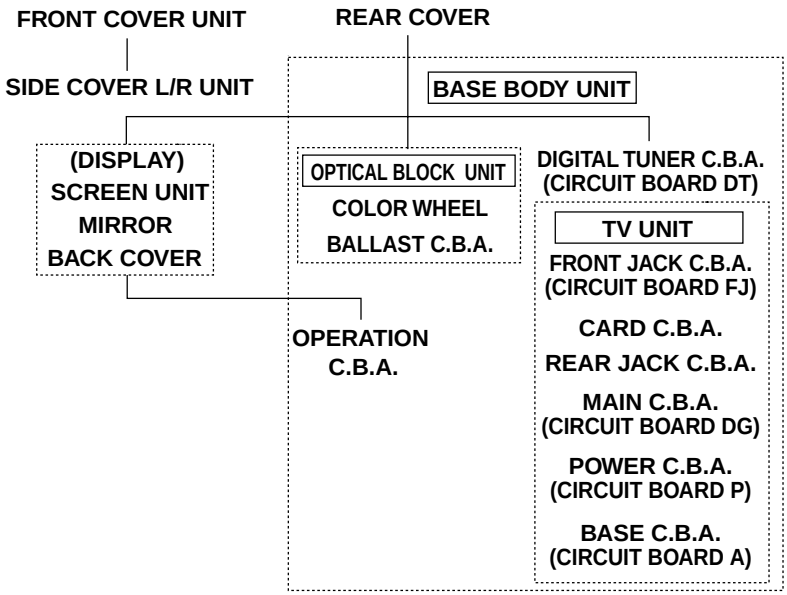
**REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY**

**REMOVAL OF THE MIRROR FROM THE BACK COVER**

**REMOVAL OF THE OPERATION C.B.A. FROM THE CABINET**

### DISASSEMBLY FLOWCHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step(s) in the reverse order. Bend, route and dress the wires as they were originally.




**Note :**

a. Place a cloth or some other soft material under the P.C. Boards and units to prevent damage.
b. When reinstalling, ensure that the connectors are connected firmly and electrical components have not been damaged.
c. Do not supply power to the unit during disassembly and reassembly.

## REMOVAL OF THE OPTICAL BLOCK UNIT FROM THE CABINET

1. **(PT-56DLX75)**
   Remove the Rear Cover by removing the 23 Screws (401) then pinching the 4 latch tabs.

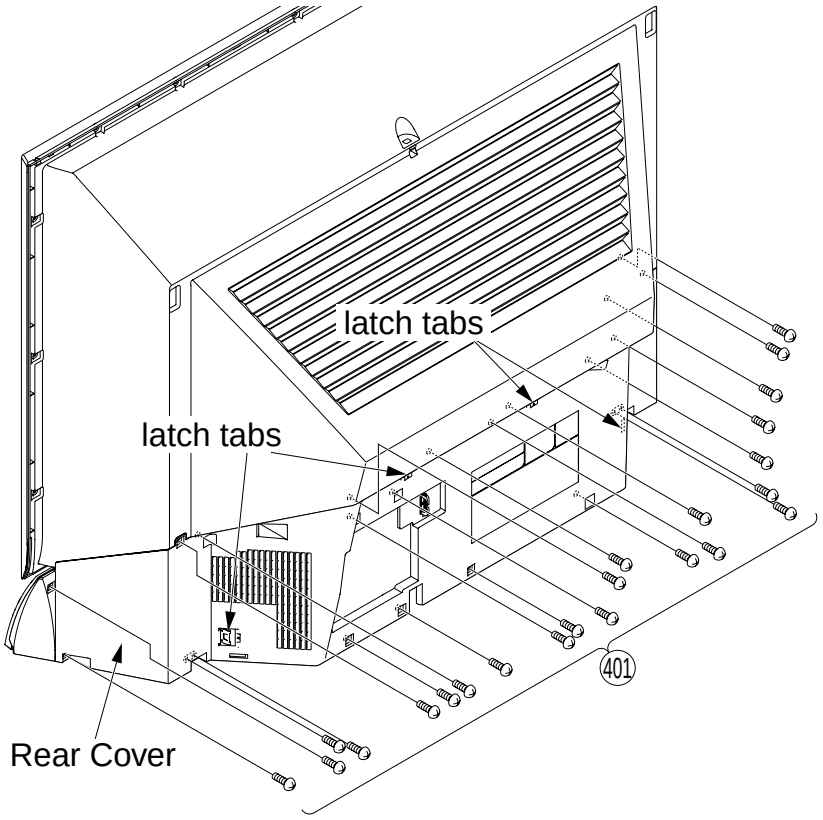



Fig. D1-1-1

**(PT-61DLX75)**
Remove the Rear Cover by removing the 25 Screws (401) then pinching the 4 latch tabs.

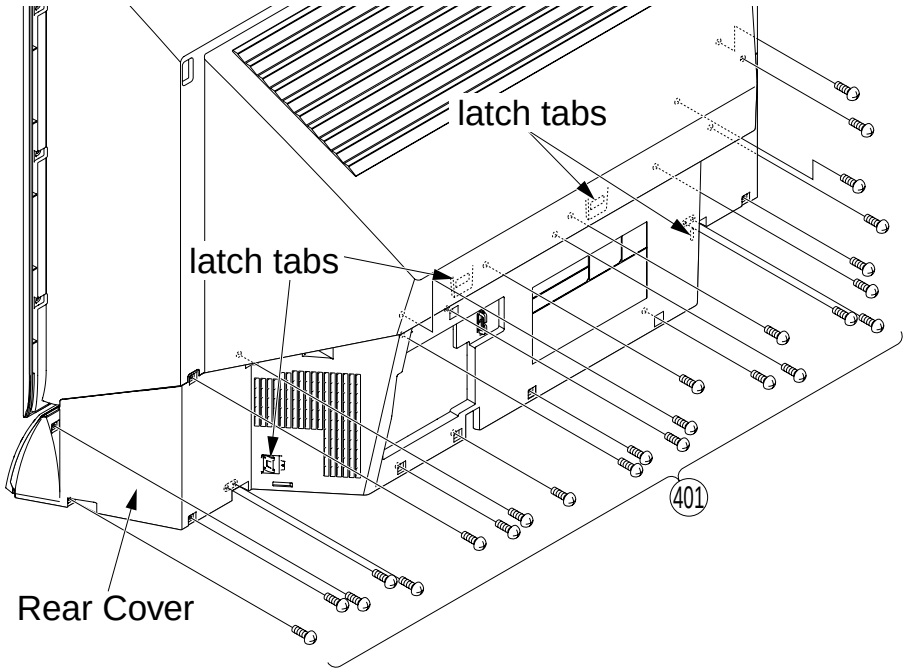



Fig. D1-1-2

2. 1) Remove the 5 Screws (402) on the Rear Shield Plate.
   2) Disconnect the Fan 1 Connector Cable, and remove the Rear Shield Plate.
   3) Remove Fan 1 by removing the 2 Screws (435).

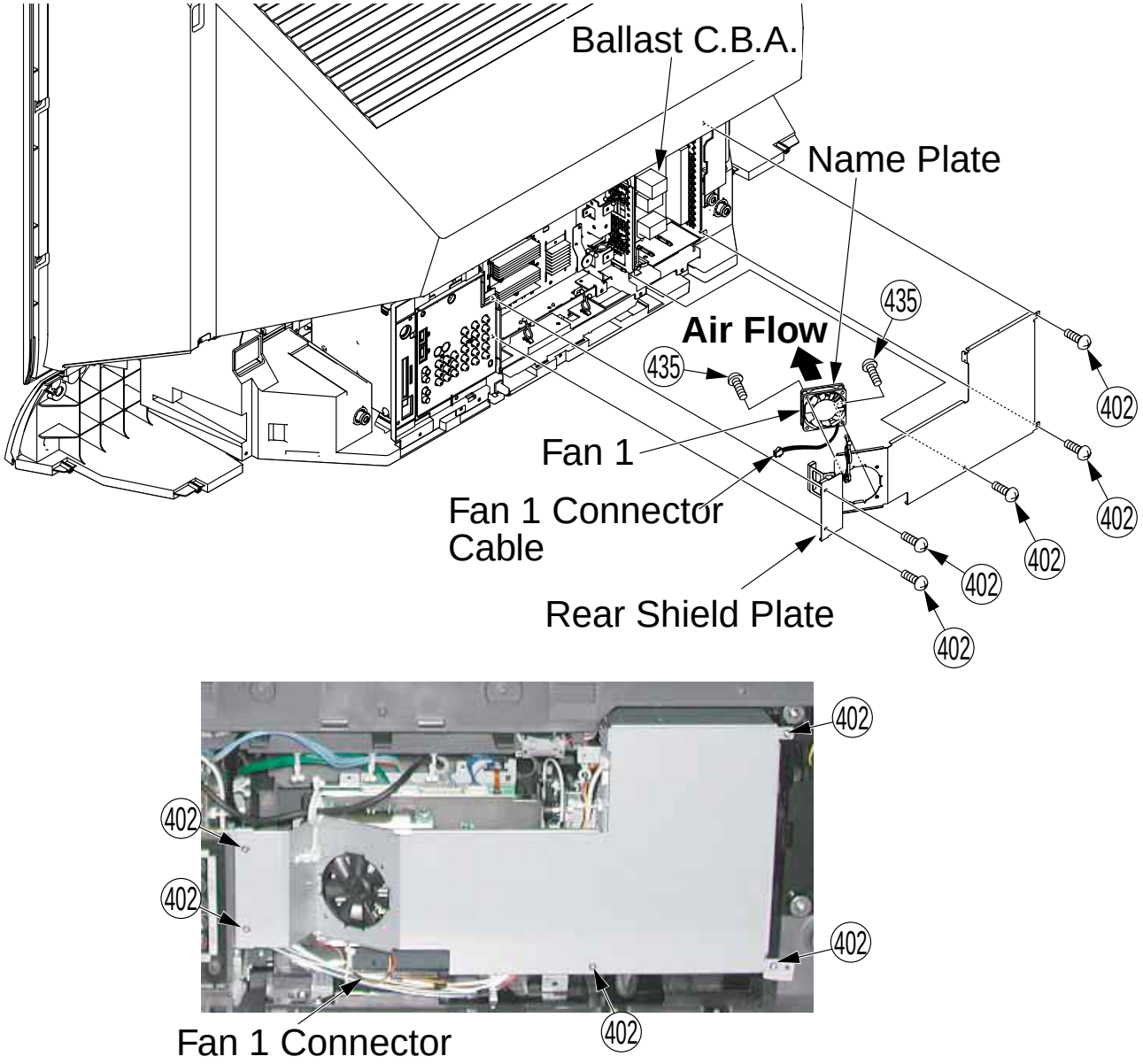
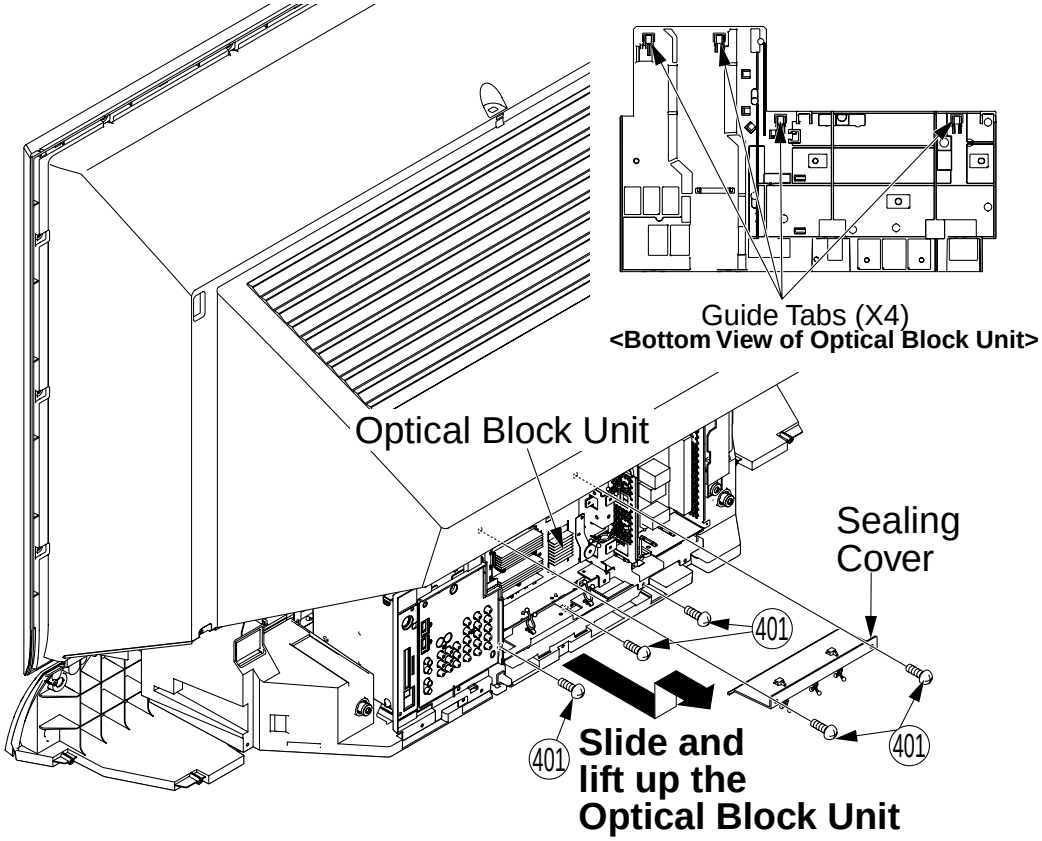



Fig. D1-2

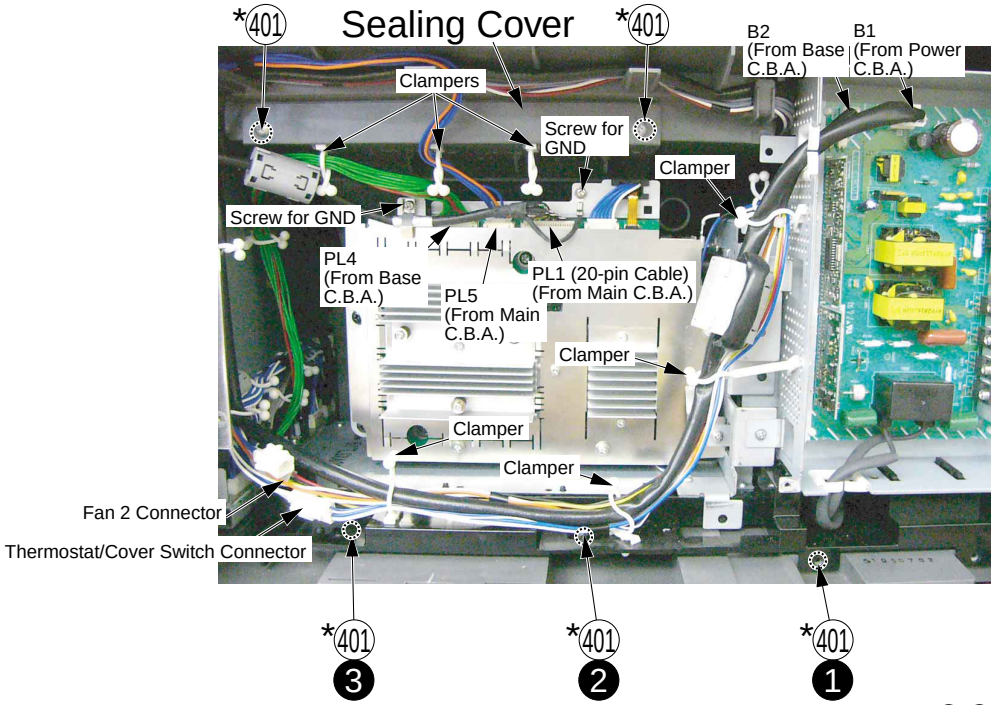
**Reassembly Note for Fan 1:**
Install Fan 1 so that the name plate (manufacture's name etc.) faces outwards (not visible from the rear side).

3. 1) Remove the 2 Screws for GND to disconnect the 20-pin Cable.
   2) Disconnect Connectors B1, B2, PL1 (20-pin Cable), PL4, PL5, the Thermostat/Cover Switch Connector and the Fan 2 Connector then releasing the clampers.

   **Note:** Take extreme care not to damage the 20-pin Cable when disconnecting.
4. 1) Remove the 2 Screws (401), and remove the Sealing Cover.
   2) Remove the 3 Screws (401), and then slide and lift up the Optical Block Unit by releasing the 4 Guide Tabs.




***: The 5 Screws *(401) are for removing the Optical Block Unit**

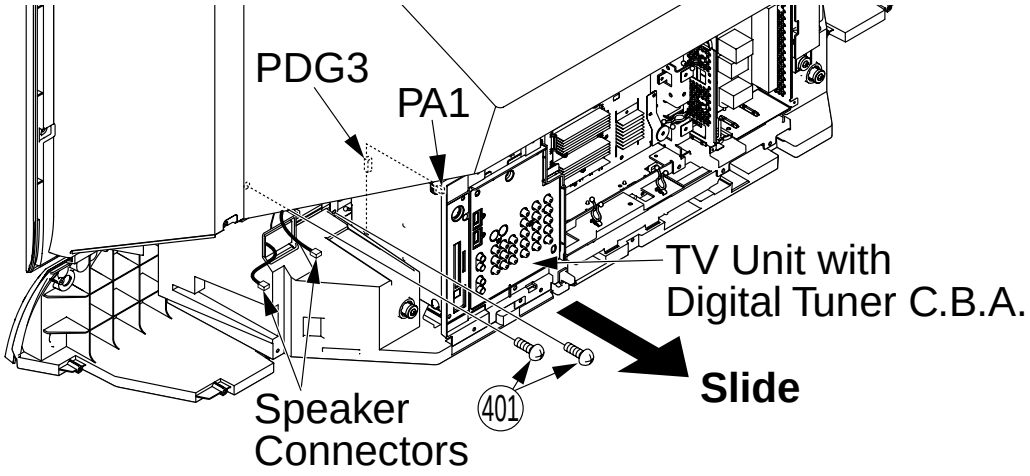



**Reassembly Note for Optical Block Unit:** When installing, tighten the 3 Screws (401) ❶❷❸ in order.

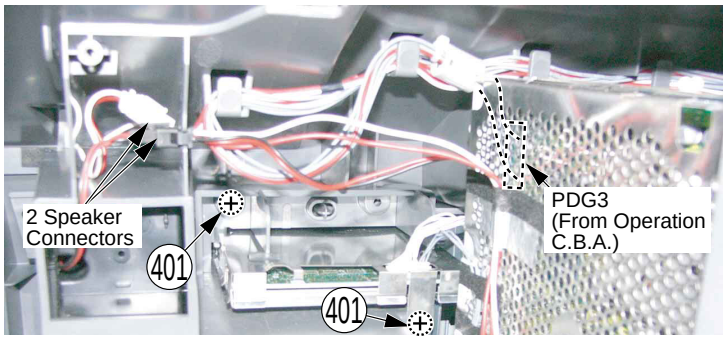
Fig. D1-3

## REMOVAL OF THE TV UNIT FROM THE CABINET

1. Remove the Rear Cover and the Rear Shield Plate. Refer to Step 1~3 in "REMOVAL OF THE OPTICAL BLOCK UNIT FROM THE CABINET."
2. 1) Remove the 2 Screws (401).
   2) Slide the TV Unit with the Digital Tuner C.B.A. slightly then disconnect Connectors PA1, PDG3 and the 2 Speaker Connectors.
   3) Remove the TV Unit with the Digital Tuner C.B.A.




**The 2 Screws (401) are for removing the TV Unit with the Digital Tuner C.B.A.**



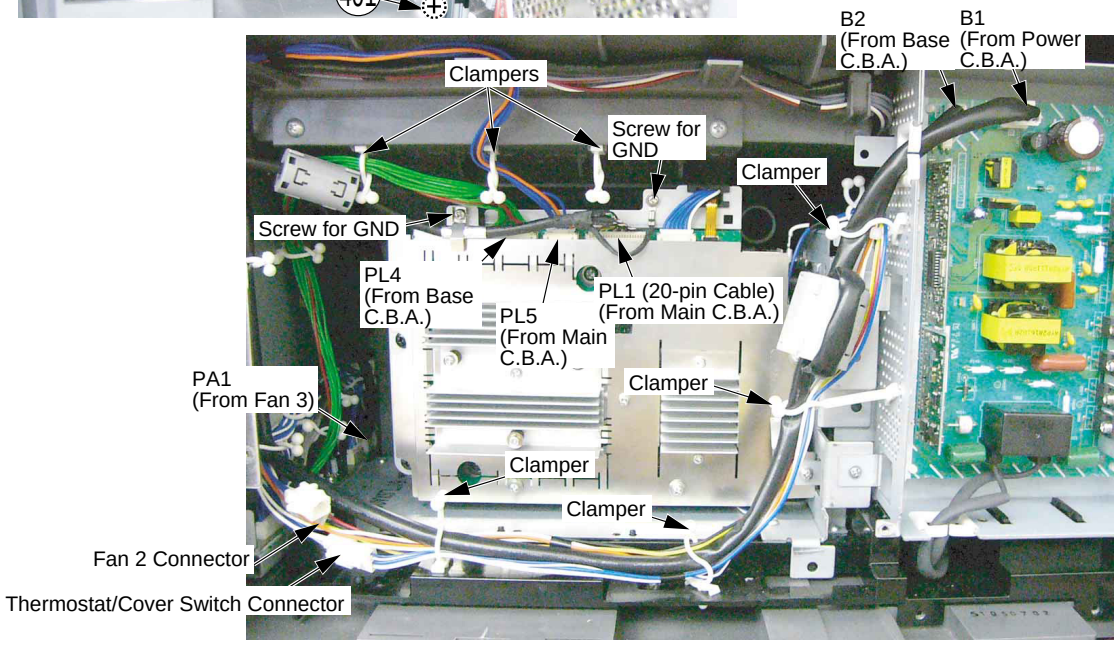




Fig. D2-1

3. 1) Remove the DTV Jack Holder by removing the Screw (402).
   2) Disconnect Connector DT10.
   3) Remove the Digital Tuner C.B.A. by removing the 5 Screws (480). (BtoB Connector DT12 is disconnected.)

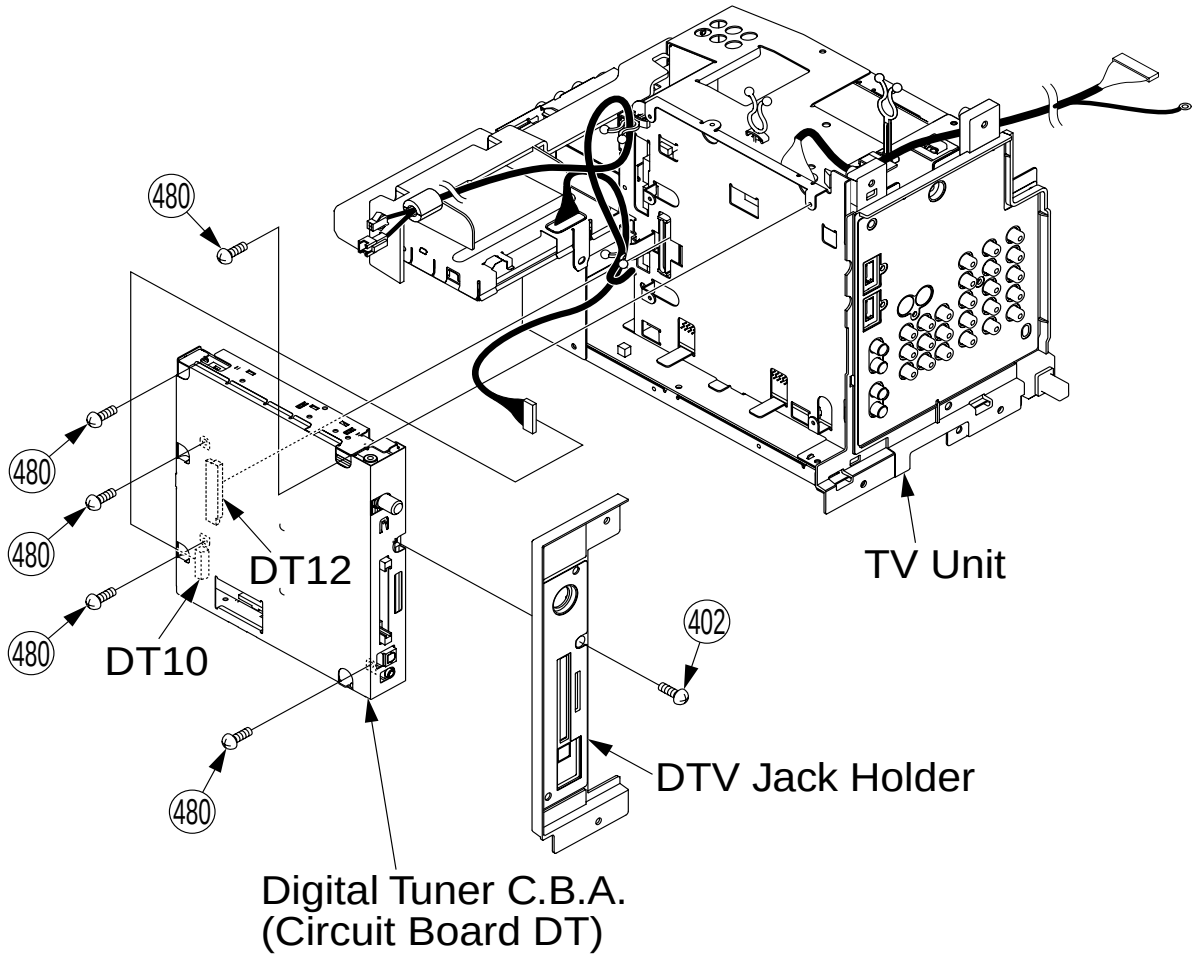



Fig. D2-2

## REMOVAL OF THE BASE BODY UNIT

1. Remove the Rear Cover. Refer to Step 1 in "REMOVAL OF THE OPTICAL BLOCK UNIT FROM THE CABINET."
2. Remove the 3 (or 5: **PT-61DLX75**) Screws (401) from rear side, and remove the Display.

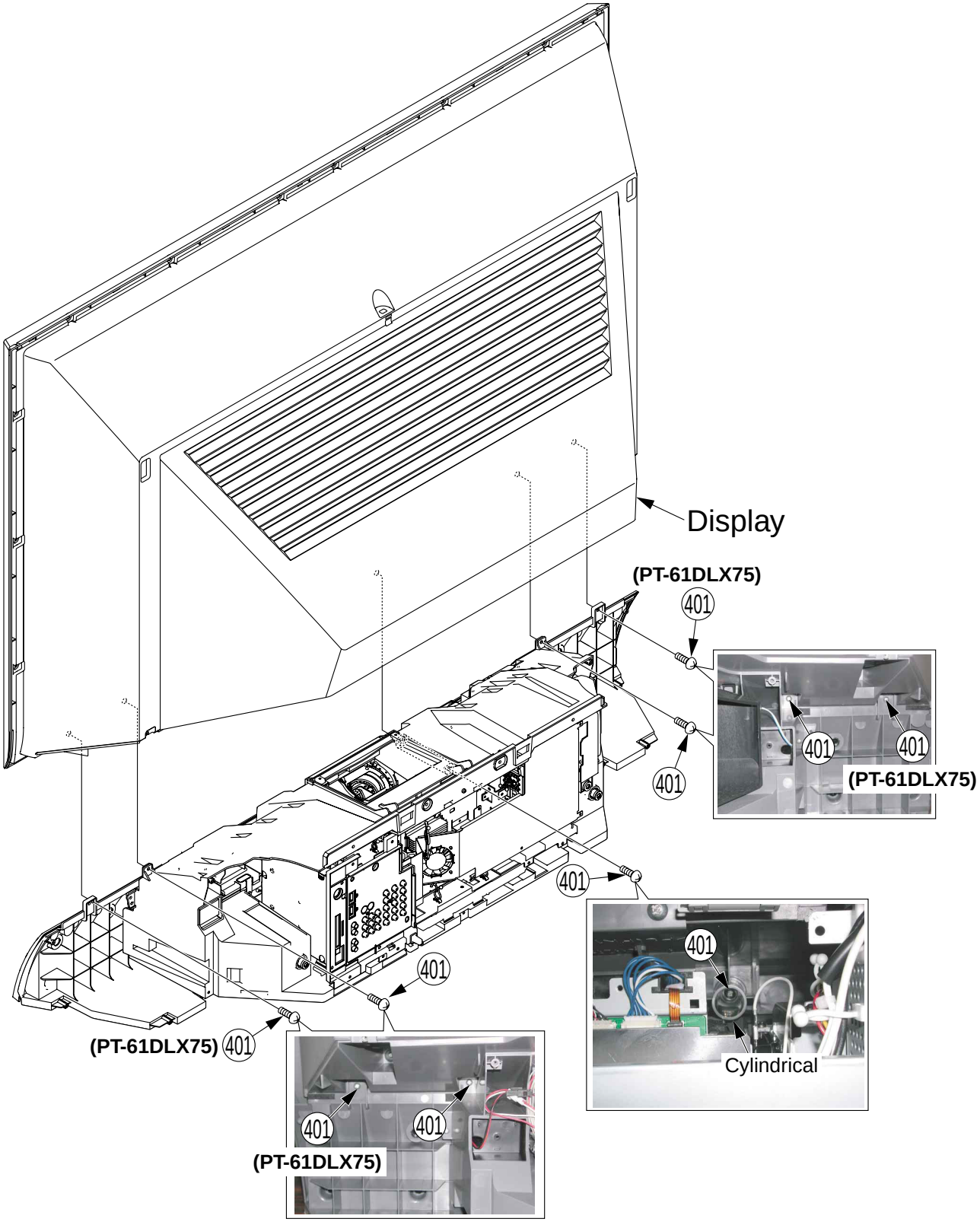



Fig. D3-1

3. 1) Remove the Front Cover Unit from the latches.
   2) Remove the Side Cover L/R Units by removing the 8 Screws (401, 454).

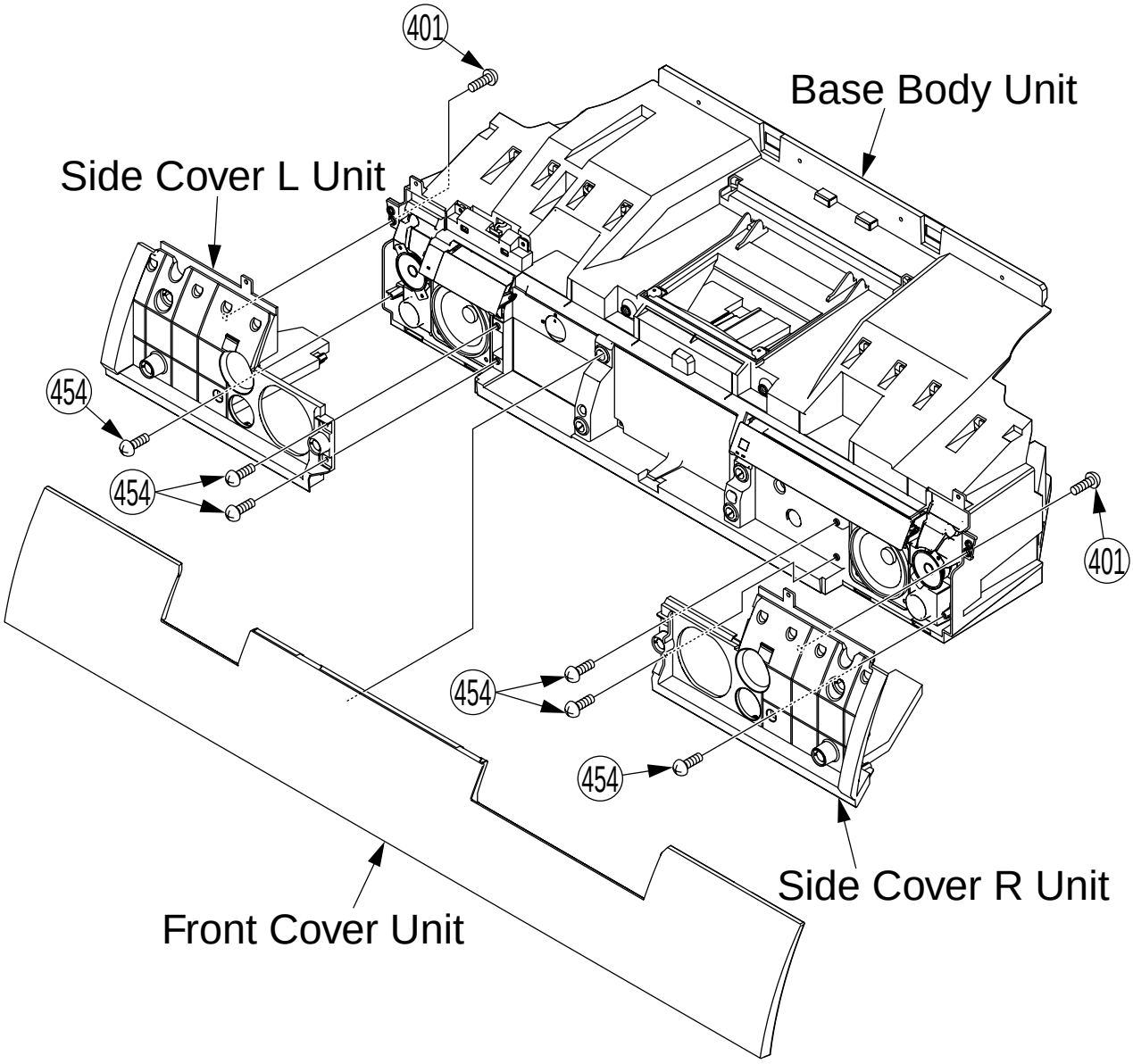



Fig. D3-2

**Replacement Note of Base Body Unit (Ref. No.40):**
Be sure to perform the "Adjustments of Optical Block Unit." Refer to "WHEN REINSTALLING THE BASE BODY UNIT INTO THE UNIT AT THE USER'S LOCATION:."

## REMOVAL OF THE BALLAST C.B.A.

1. Remove the Rear Cover and the Rear Shield Plate. Refer to Step 1~2 in "REMOVAL OF THE OPTICAL BLOCK UNIT FROM THE CABINET."
2. Remove the Lamp by loosening the Screw from the front of the cabinet.
3. 1) Disconnect Connectors B1, B2 then releasing the clampers.
   2) Remove the 2 Screws (421), disconnect the Lamp Connector and release from the hook.
   3) Remove the Ballast C.B.A. after releasing the 4 latch tabs.

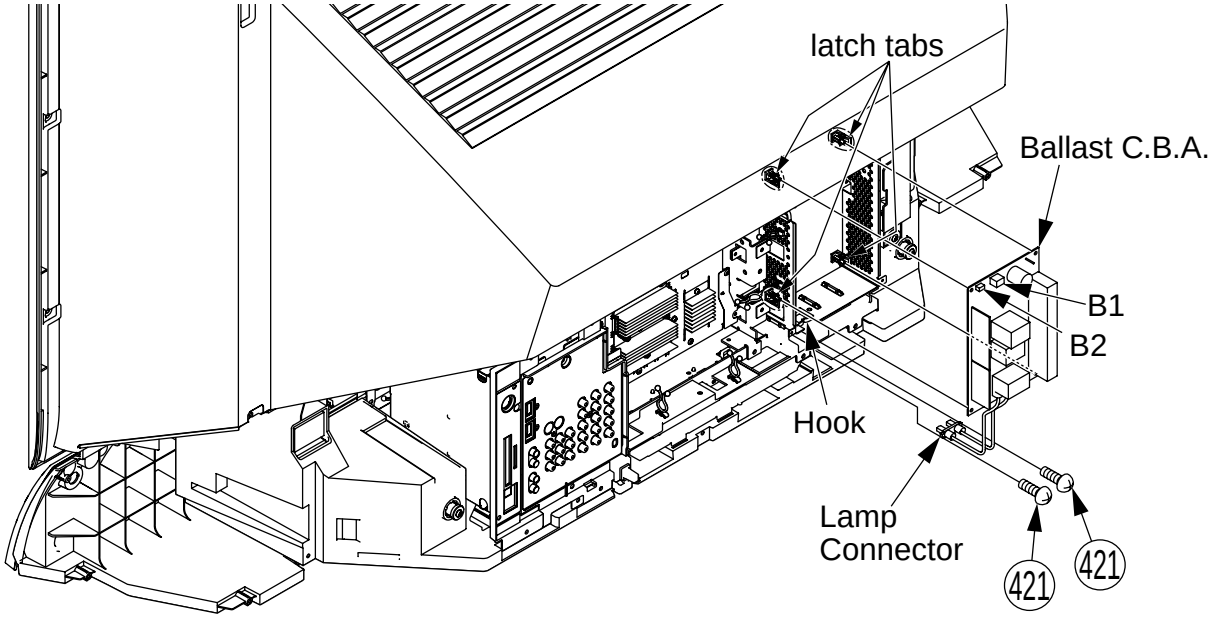



Fig. D4

## REMOVAL OF THE FRONT JACK C.B.A. (CIRCUIT BOARD FJ), THE CARD C.B.A., THE REAR JACK C.B.A., THE POWER C.B.A. (CIRCUIT BOARD P), THE MAIN C.B.A. (CIRCUIT BOARD DG) AND THE BASE C.B.A. (CIRCUIT BOARD A) FROM THE TV UNIT

**1. CAUTION:**

**Be sure to make a note of the CURRENT LAMP value (value A) in Service Mode (1/4):**

LAMP OPERATION TIME is stored in EEPROM on the Main C.B.A. Therefore, before removing the Main C.B.A. or the TV Unit at the user's location, make a note of the CURRENT LAMP value (value A) in Service Mode (1/4).
Then, after installing the new Main C.B.A. or the TV Unit at the user's location, set the CURRENT LAMP value to the original value (value A) in Service Mode.
Otherwise, OSD and LED Lamp replacement indications will be displayed at the wrong time.

**Note:**
**In case it is impossible to make a note of the CURRENT LAMP value** because of a defective Main C.B.A., ask the customer their daily average use and the approximate age of the current Lamp. Then, calculate the CURRENT LAMP value as follows and make a note.

| Daily average use (hours) | X | Approx. age (days) | = | **CURRENT LAMP** (hours) |
|---|---|---|---|---|

2. Remove the TV Unit. Refer to Steps 1~3 in "REMOVAL OF THE TV UNIT FROM THE CABINET."
3. 1) Remove the Front Jack Earth Plate by removing Screw (402).
   2) Disconnect Connectors P3901, P3902, P3903.
   3) Remove the Front Jack C.B.A. by removing the 2 Screws (421).
   4) Remove the Front Jack Holder with the Card C.B.A. by removing Screw (402) then releasing the 2 Locking Tabs.
   5) Remove the Card C.B.A. by removing the 2 Screws (421).

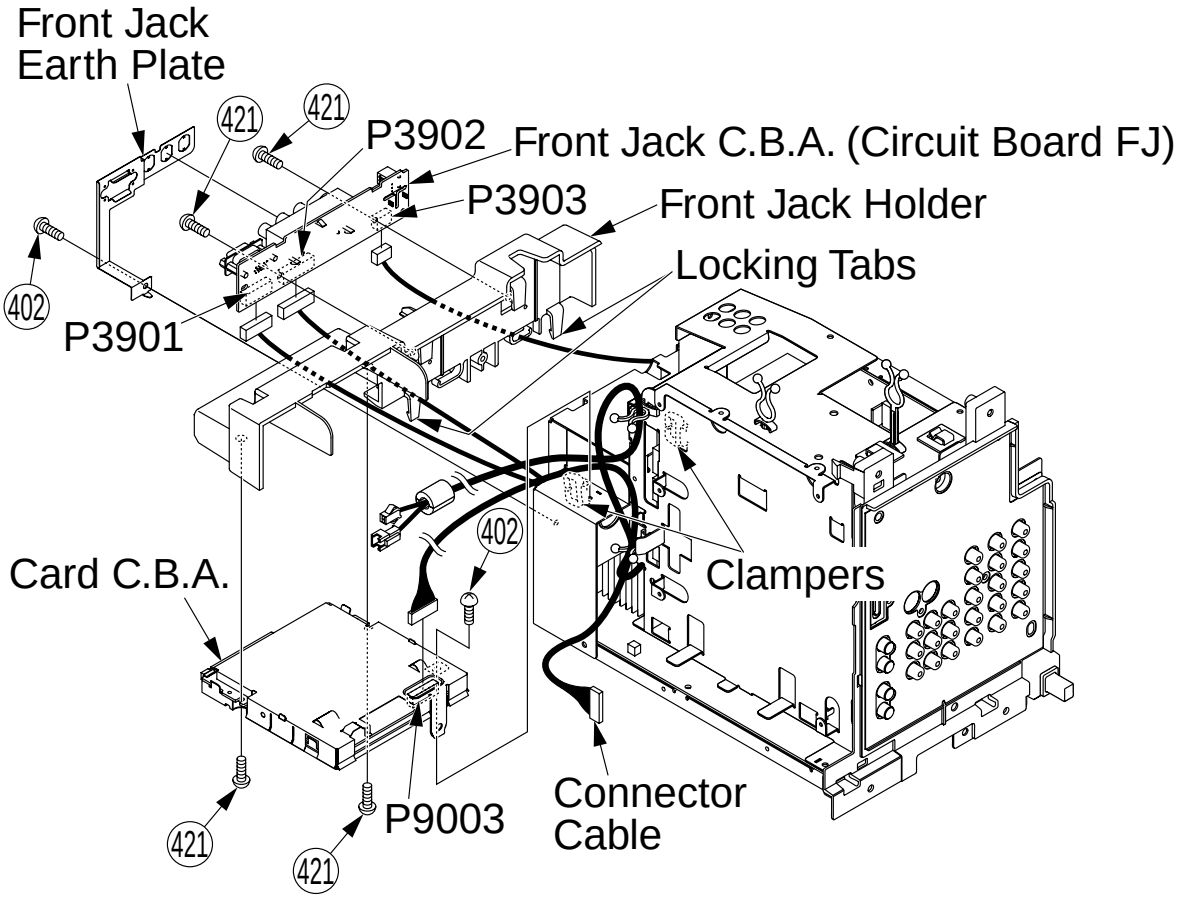



Fig. D4-2

**Replacement Note for Card C.B.A.:**
These parts will be necessary when replacing. Set aside, keep, and re-use.
- P9003 Connector Cable

4. 1) Release the AC Cord from the slot of the Rear Jack Holder.
   2) Remove the Rear Jack Holder by removing the 7 Screws (402) then releasing the 3 Locking Tabs.
   3) Remove the Top Shield Metal by removing the 8 Screws (402).
   4) Remove Screw (479), and pull off both the Rear Jack Earth Plate and the Rear Jack C.B.A. (BtoB Connector P3501 is disconnected.)

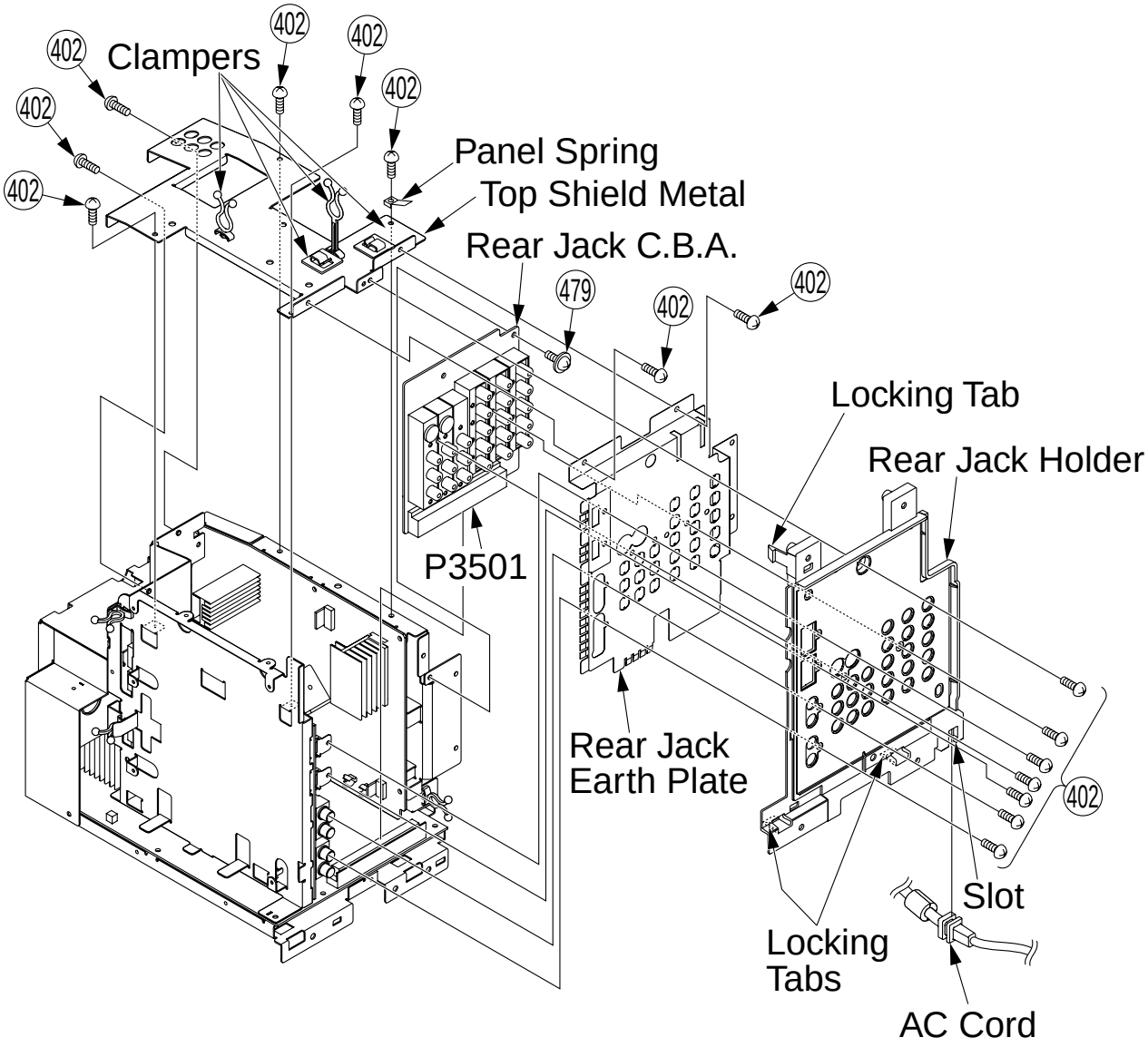



Fig. D4-3

**Replacement Note for Rear Jack C.B.A.:**
These parts will be necessary when replacing. Set aside, keep, and re-use.
- Rear Jack Earth Plate

5. 1) Remove the Front Shield Metal by removing the 5 Screws (402).
   2) Remove the 2 Screws (402), and pull off the Main C.B.A. with the Main/Tuner Board Mount Metal. (BtoB Connector PDG1 is disconnected.)
   3) Remove the Main C.B.A. by removing the 6 Screws (479).

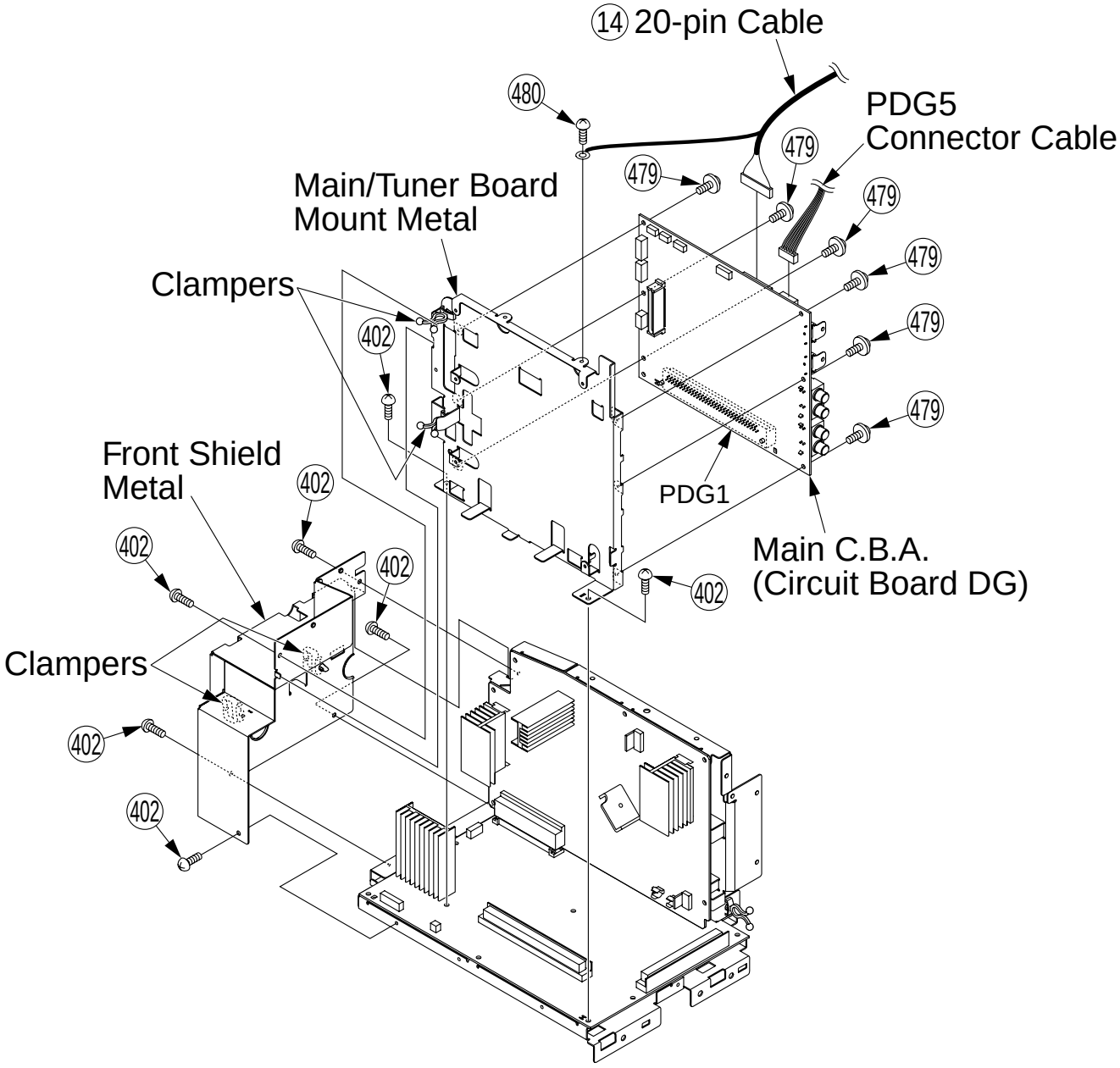



Fig. D4-4

**Replacement Notes for Main C.B.A. (Circuit Board DG):**
These parts will be necessary when replacing. Set aside, keep, and re-use.
- 20-pin Cable (PDG4 Connector Cable) (Ref. No. 14)
- PDG5 Connector Cable

6. 1) Remove the 2 Screws (402), and pull off the Power C.B.A. with the Power Board Mount Metal after releasing from the clampers. (BtoB Connector P802 is disconnected.)
   2) Remove the Power C.B.A. by removing the 6 Screws (479).

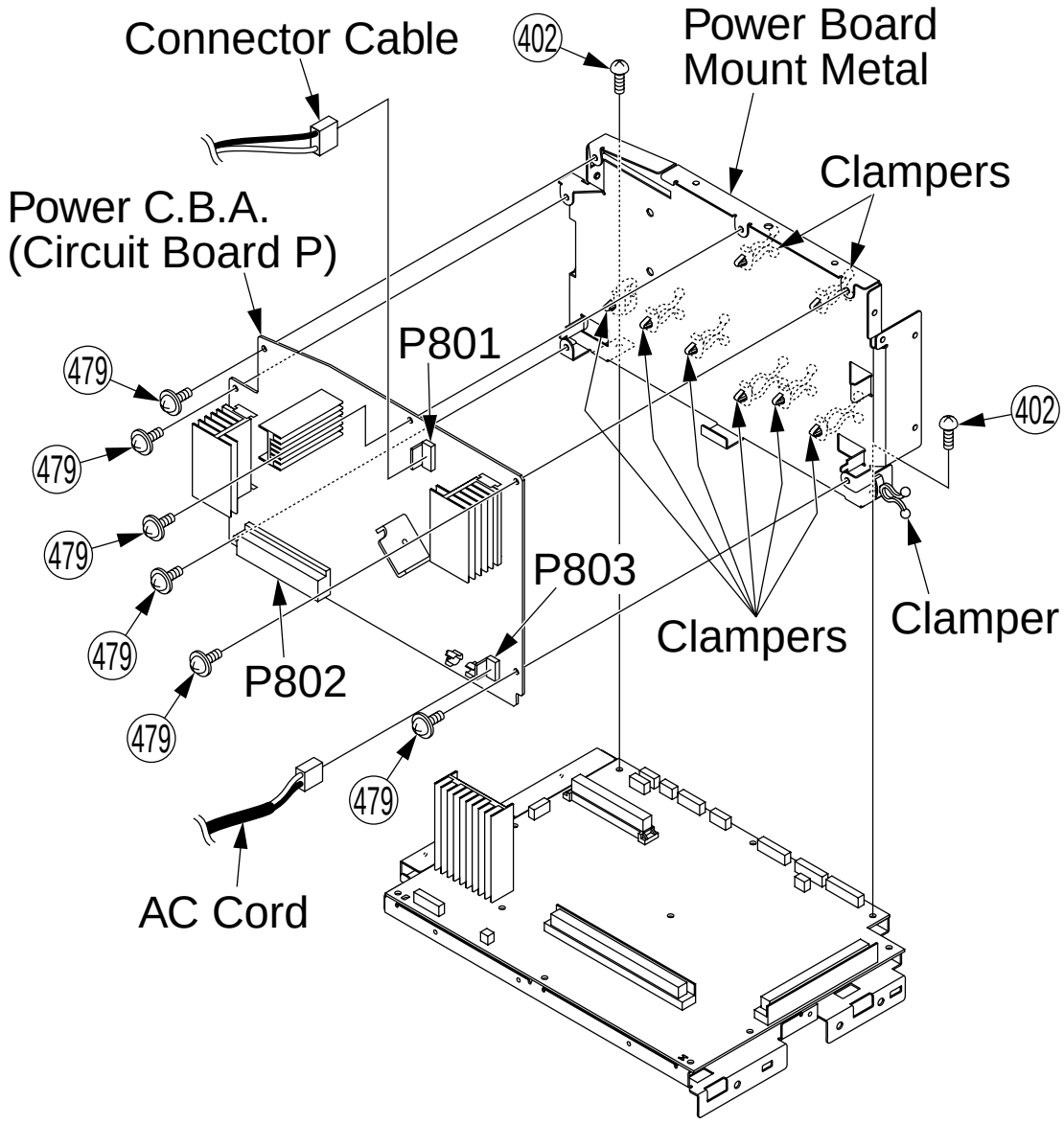



Fig. D4-5

**Replacement Notes for Power C.B.A. (Circuit Board P):**
These parts will be necessary when replacing. Set aside, keep, and re-use.
- P801 Connector Cable
- AC Cord

7. 1) Disconnect Connectors PA10, PA5, PA2, PA7, PA12, PA6, PA9.
   2) Remove the Base C.B.A. by removing the 6 Screws (479).

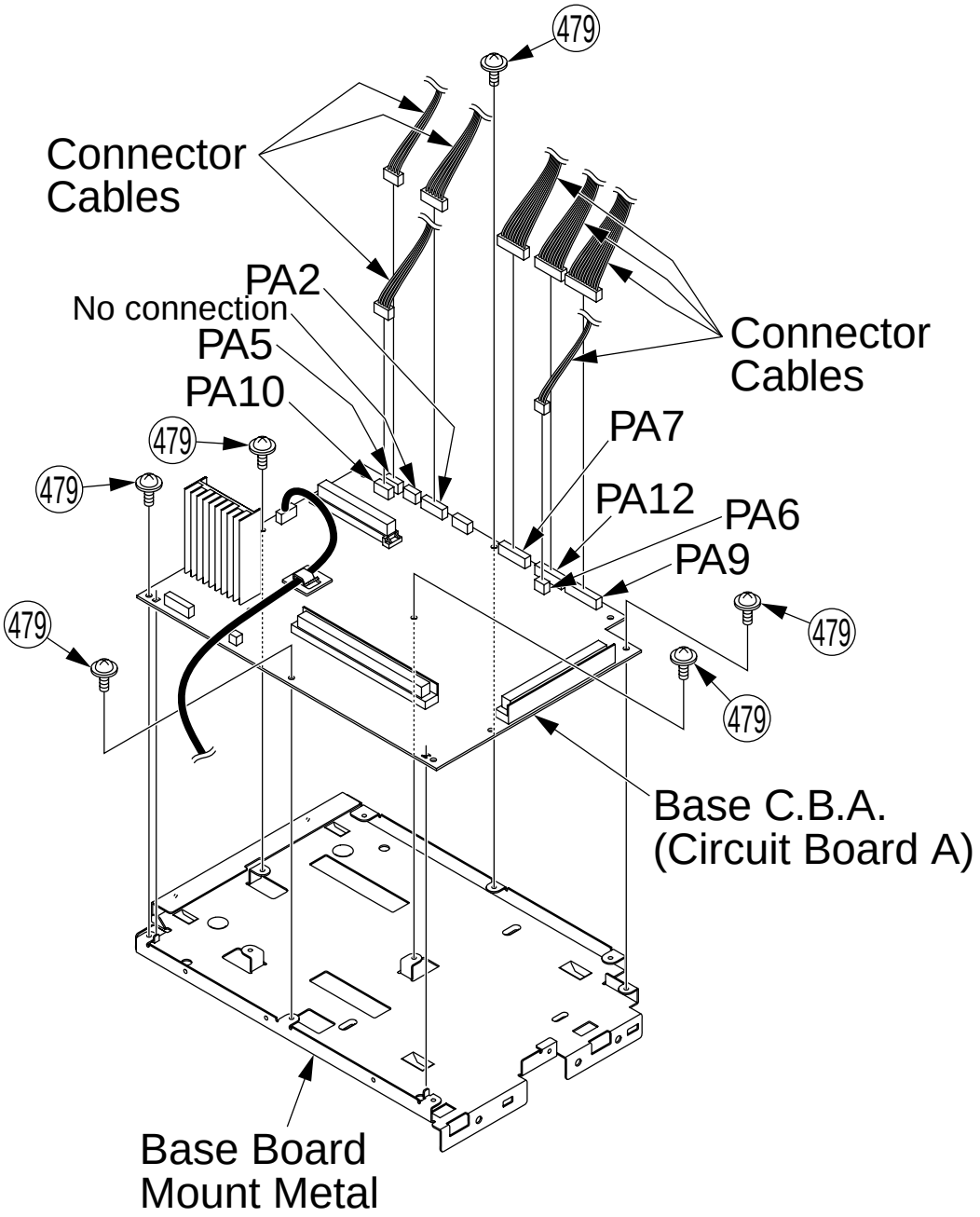



Fig. D4-6

**Replacement Note for Base C.B.A. (Circuit Board A):**
These parts will be necessary when replacing. Set aside, keep, and re-use.
- PA2, PA5, PA6, PA7, PA9, PA10, PA12 Connector Cables

## REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

1. Remove the DISPLAY. Refer to Steps 1~2 in "REMOVAL OF THE BASE BODY UNIT."
2. **(PT-56DLX75)**
   Remove the Screen Unit by removing the 19 Screws (401).

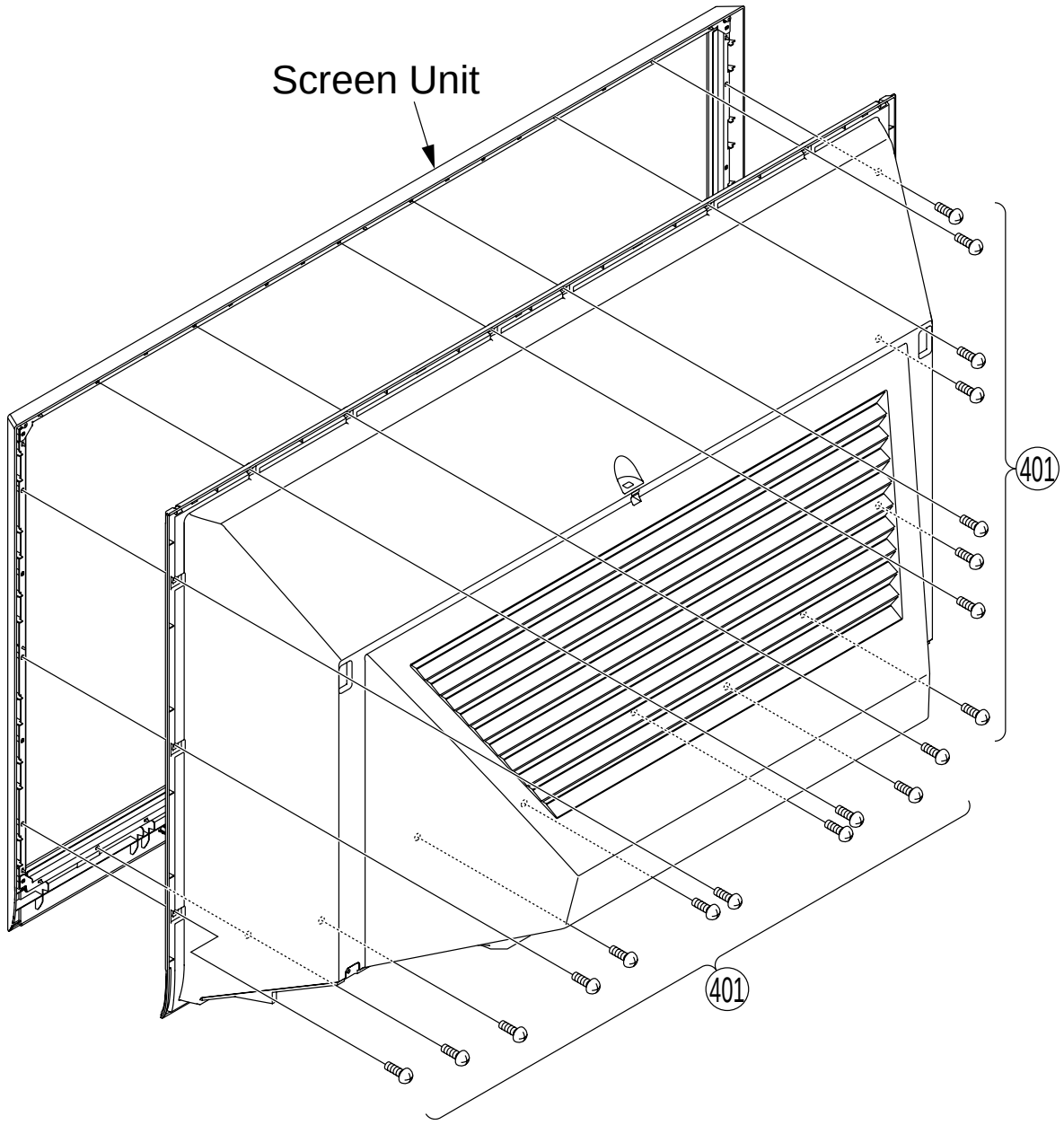



Fig. D5-1-1

**(PT-61DLX75)**
Remove the Screen Unit by removing the 17 Screws (401).

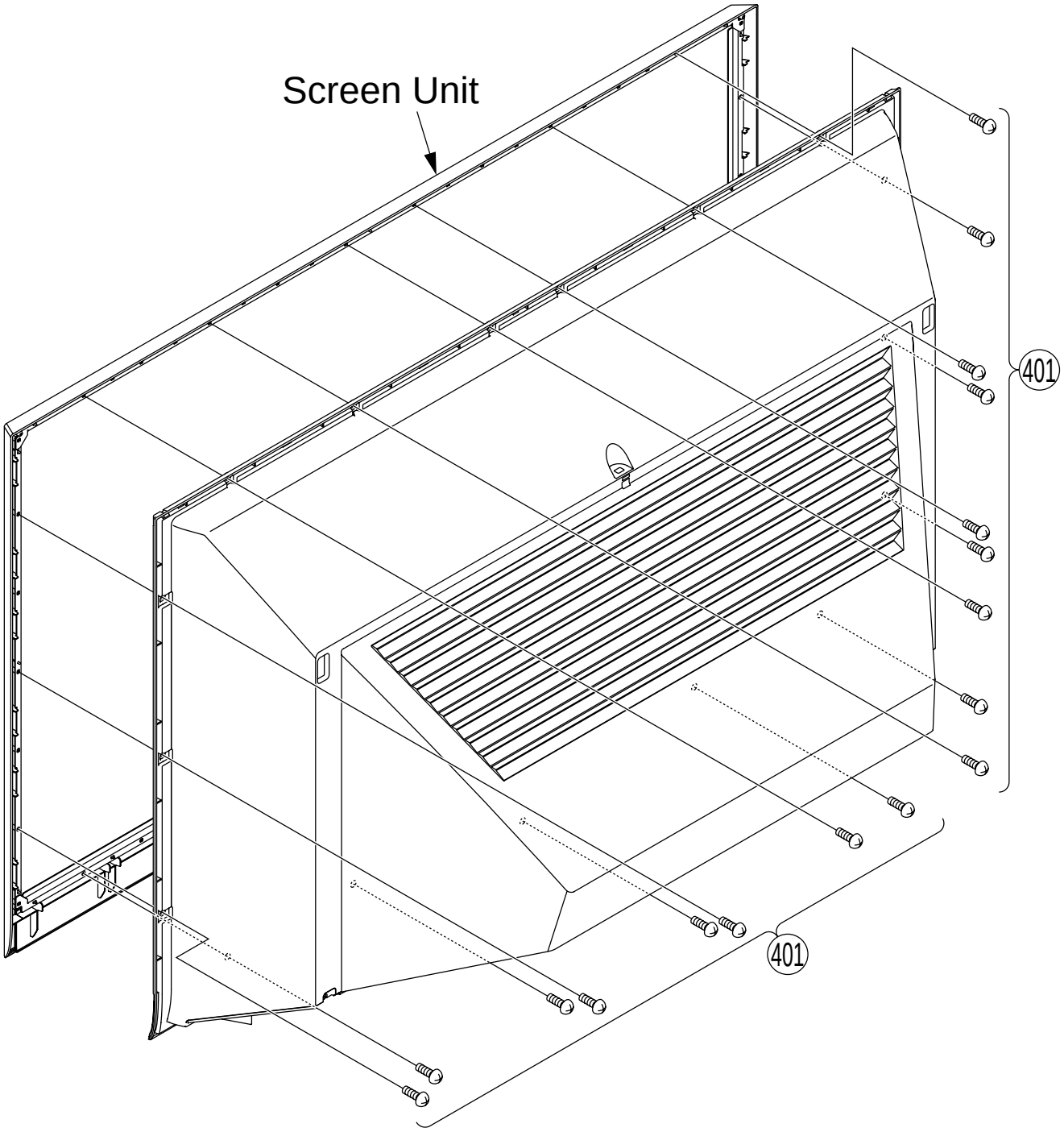



Fig. D5-1-2

3. **(PT-56DLX75)**
Remove the 2 Screen Angle H Units and the 2 Screen Angle V Units by removing the 14 Screws (465), and remove the Fresnel Lens and the Lenticular Screen.

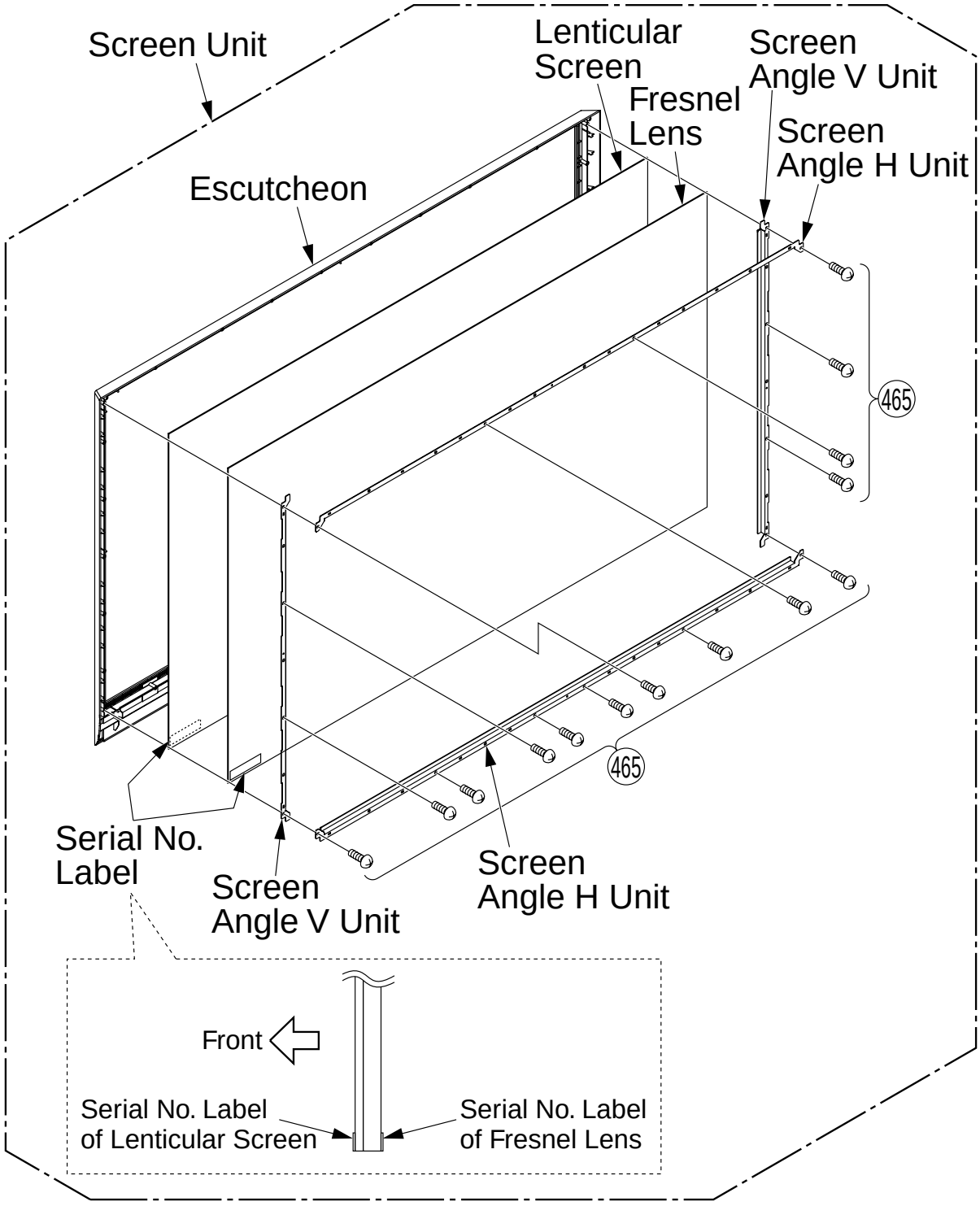



Fig. D5-2-1

**Reassembly Note:**
Install the Lenticular Screen and the Fresnel Lens so that the Serial No. Labels are on the outside as shown above.

**Replacement Note for Screen Unit:**
The Screen Unit is supplied as a unit, or the individual parts (Fresnel Lens, Lenticular Screen) in the Screen Unit are also supplied. When replacing the Fresnel Lens and the Lenticular Screen, take care that dust, etc., does not adhere between the Fresnel Lens and the Lenticular Screen. Due to this risk, it is strongly recommended to replace the Screen Unit as a unit.

**(PT-61DLX75)**
Remove the 2 Screen Angle H Units and the 2 Screen Angle V Units by removing the 18 Screws (465), and remove the Fresnel Lens and the Lenticular Screen.

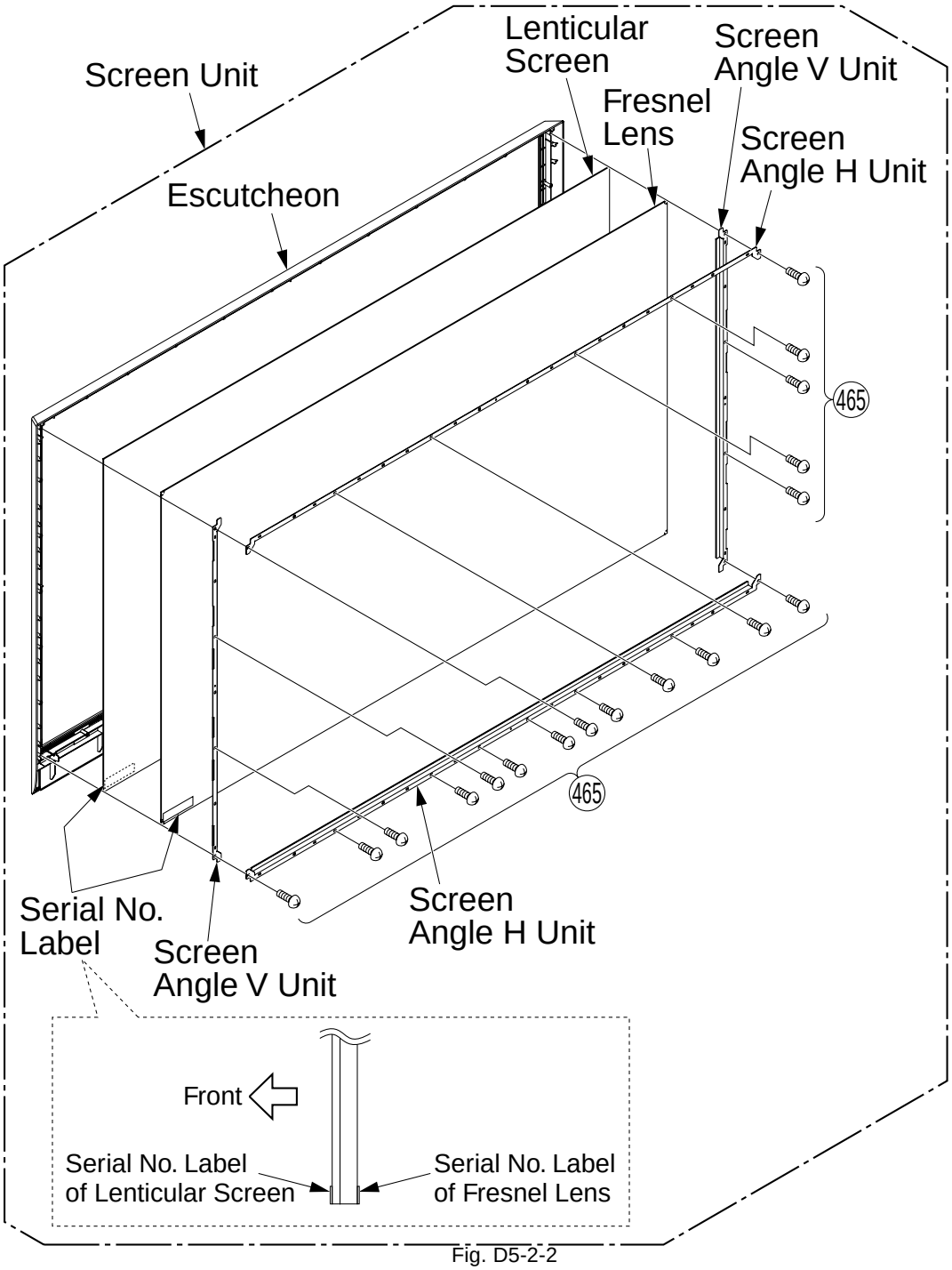



Fig. D5-2-2

**Reassembly Note:**
Install the Lenticular Screen and the Fresnel Lens so that the Serial No. Labels are on the outside as shown above.

**Replacement Note for Screen Unit:**
The Screen Unit is supplied as a unit, or the individual parts (Fresnel Lens, Lenticular Screen) in the Screen Unit are also supplied. When replacing the Fresnel Lens and the Lenticular Screen, take care that dust, etc., does not adhere between the Fresnel Lens and the Lenticular Screen. Due to this risk, it is strongly recommended to replace the Screen Unit as a unit.

## REMOVAL OF THE MIRROR FROM THE BACK COVER

1. Remove the Screen Unit. Refer to Steps 1~4 in "REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY."
2. 1) Remove the 3 Mirror Holder H and the 2 Mirror Holder V Unit by removing the 10 Screws (401).
   2) Remove the Mirror from the top by releasing the Back Cover slots.
   **Note:** Be careful that the Mirror does not fall down when removing.

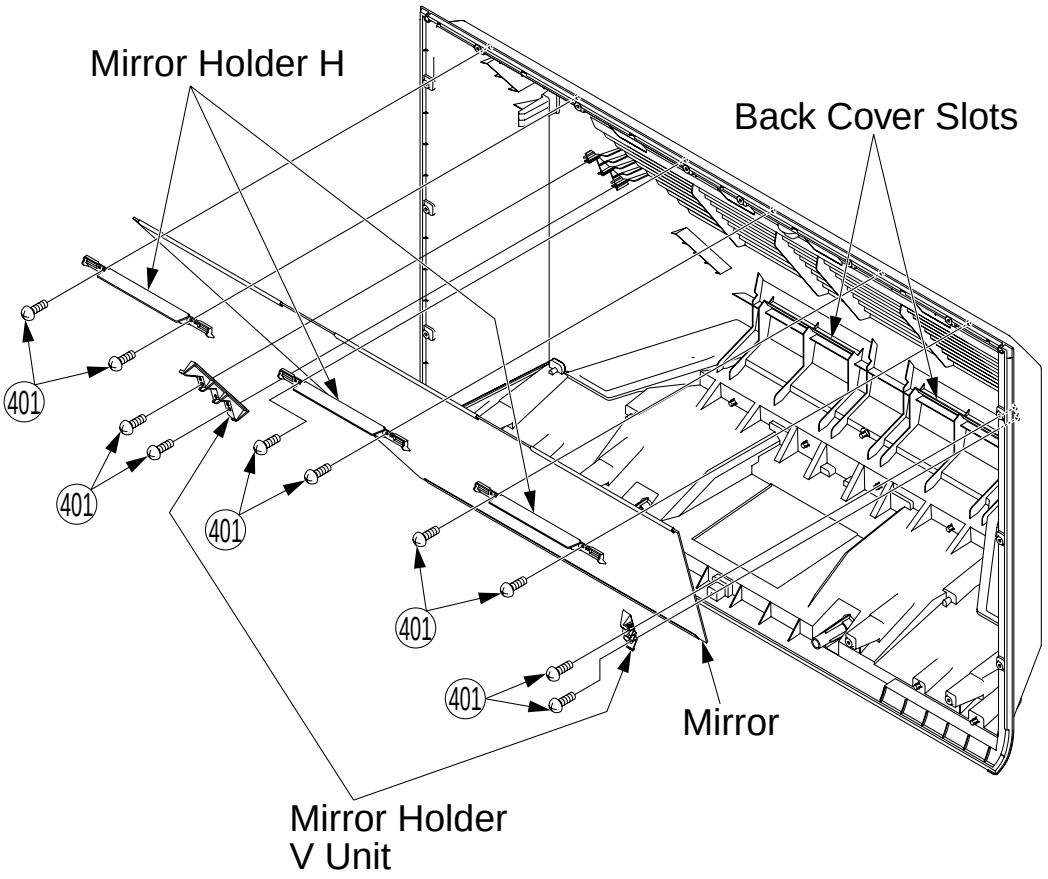
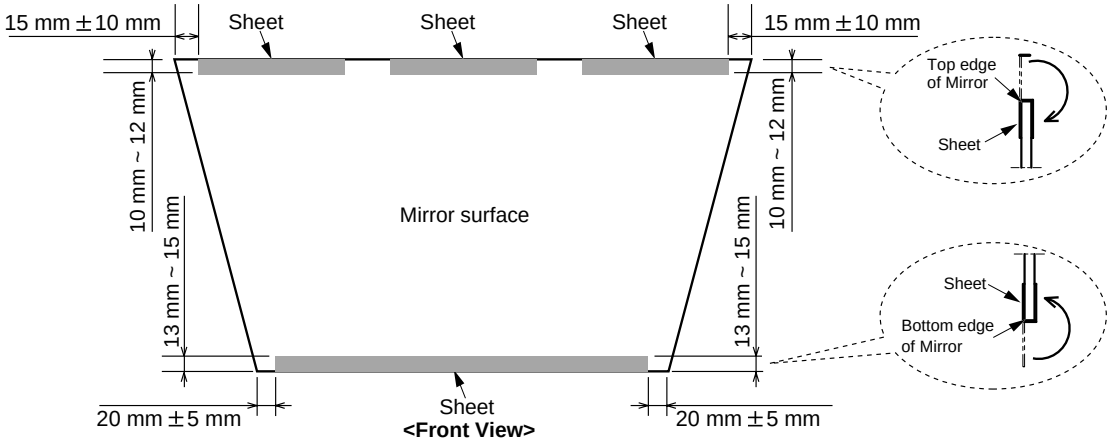



Fig. D6-1-2

**Reassembly Notes for Mirror:**
**Install the Mirror using the following procedures:**
1) Place the 4 sheets on the top and bottom edges of the Mirror.




**<Front View>**

2) Hold the sheet portions of the Mirror, and insert the Mirror from the top into the Back Cover slots carefully. When handling the Mirror, do not touch the Mirror surface.
3) Install the 3 Mirror Holder H and the 2 Mirror Holder V Units on the Mirror and tighten the 10 Screws (401).

## REMOVAL OF THE OPERATION C.B.A. FROM THE CABINET

1. Remove the Display and the Front Cover Unit. Refer to Step 1 ~ 2 in "REMOVAL OF THE BASE BODY UNIT."
2. 1) Disconnect Connector P6701.
   2) Remove the Operation Holder Unit with the Operation C.B.A. by removing the 2 Screws (401) then releasing the 2 Locking Tabs.
   3) Remove the Operation C.B.A. by removing the 2 Screws (421).

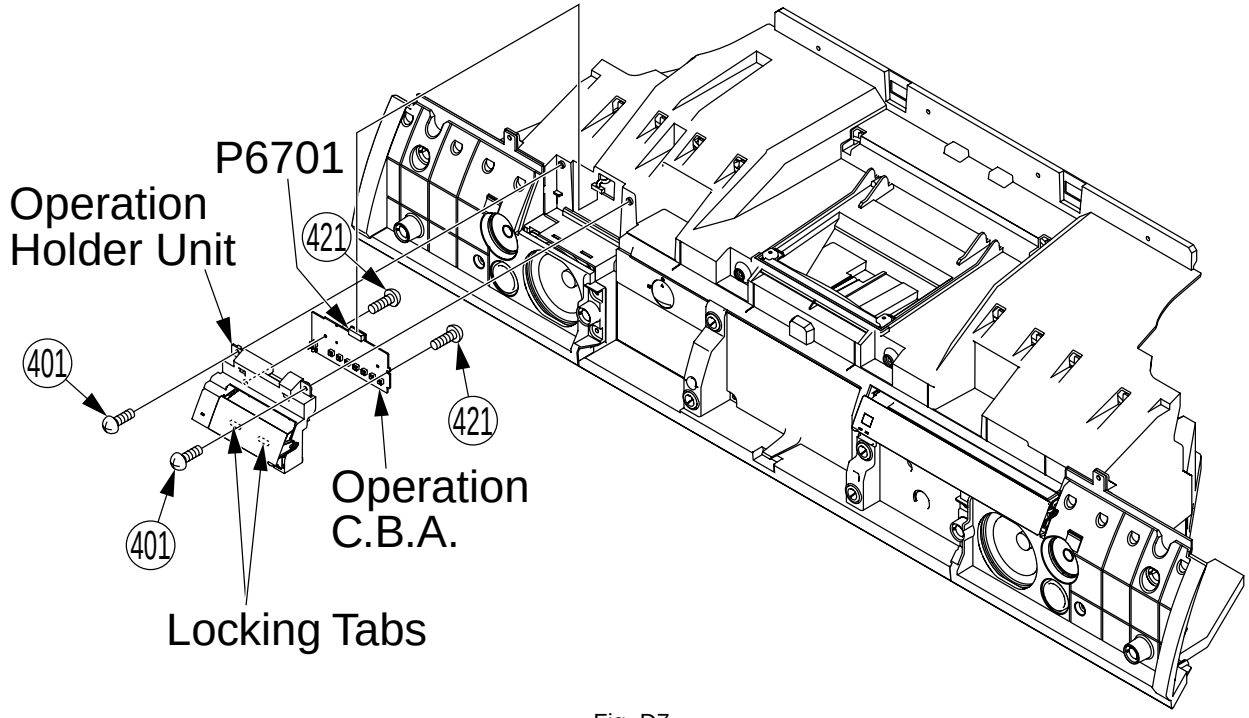



Fig. D7

# 5.2. OPTICAL BLOCK SECTION

# OPTICAL BLOCK SECTION

## DISASSEMBLY METHOD FOR OPTICAL BLOCK UNIT

When reassembling, perform the step(s) in the reverse order. Bend, route and dress the wires as they were originally.

**Note :**

a. Place a cloth or some other soft material under the P.C. Boards and units to prevent damage.
b. When reinstalling, ensure that the connectors are connected firmly and electrical components have not been damaged.
c. Do not supply power to the unit during disassembly and reassembly.

## REMOVAL OF THE COLOR WHEEL UNIT

**CAUTION:**
1. Do not touch either side of the Color Wheel (Filter) surface or the Color Wheel Hub.
   Use extreme caution when handling the Color Wheel to avoid damage, dust, spots (especially fingerprints), etc.
   Clean the Color Wheel if necessary. Refer to "CLEANING METHOD" in SERVICE NOTES.
2. Be extremely careful not to damage the Color Wheel F.P.C.

1. 1) Disconnect Connectors PL2, PL3 and release from the hook.
   2) Peel the Sheet from the Color Wheel F.P.C.
   3) To access Screw (463), lift the Dustproof Sheet Unit, and remove the Optical Chassis CW Cover by removing the 2 Screws (463) and then release from the hook of the Optical Chassis CW Cover.
   4) Remove the CW Sponge and carefully pull off the Color Wheel Unit.

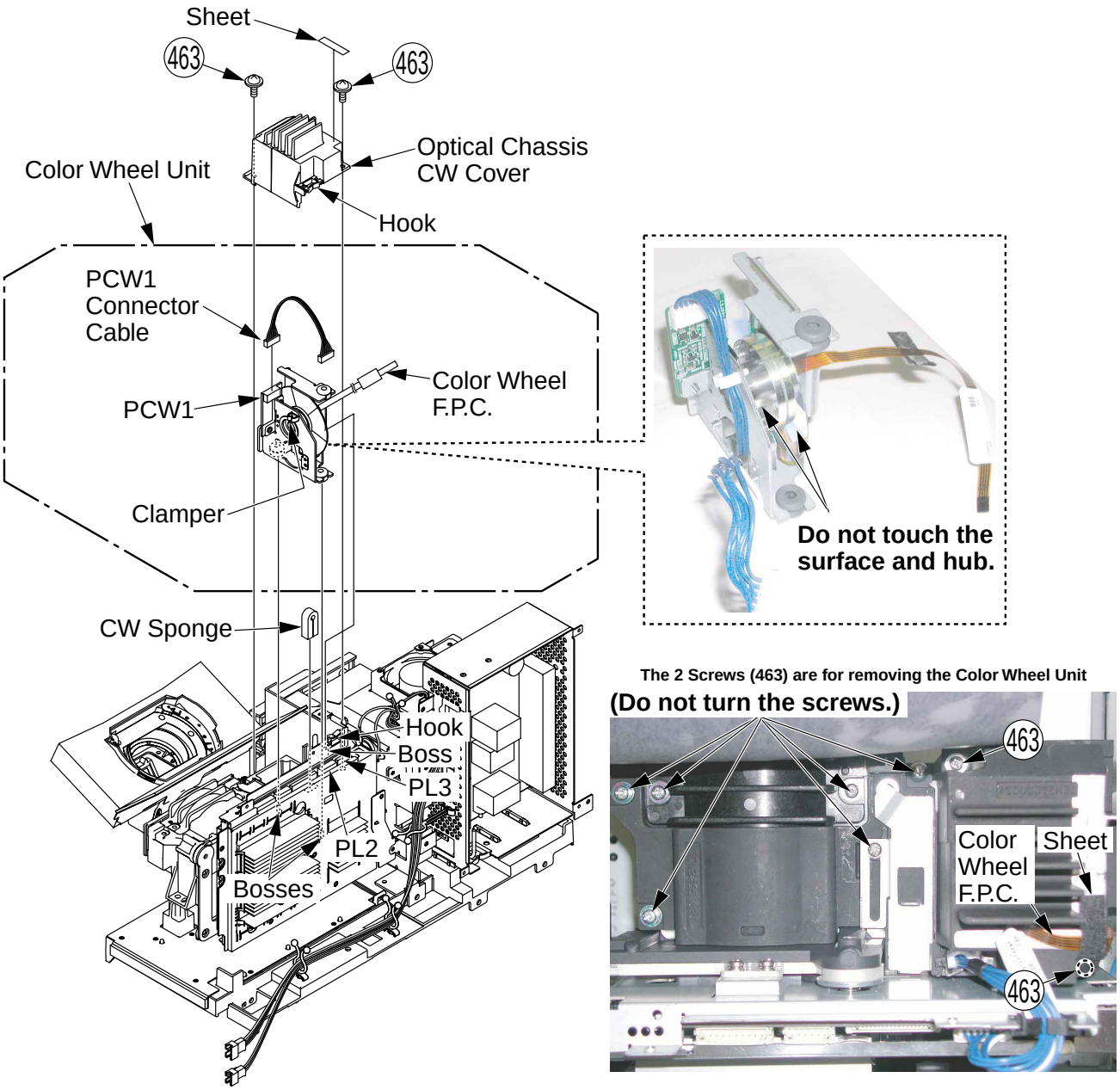



Fig. P2-1

**Reassembly Note for the Color Wheel Unit:**

1) Install the Color Wheel Unit into the Optical Chassis using the 3 Bosses. Then install the CW Sponge so it covers the Connector Cable.

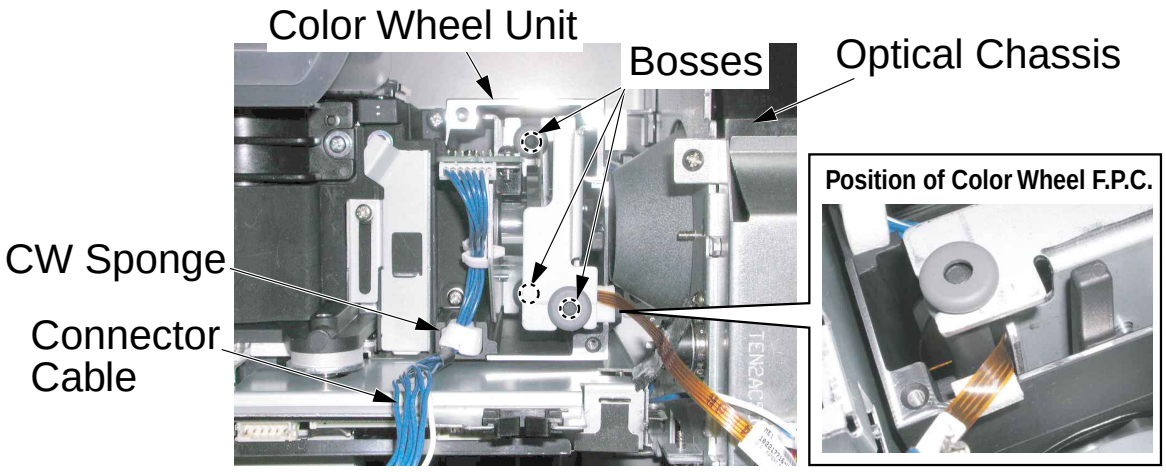



Fig. P2-2

2) Pass the Connector Cable through the hook of the Optical Chassis CW Cover, then install the Optical Chassis CW Cover with the 2 Screws (463).

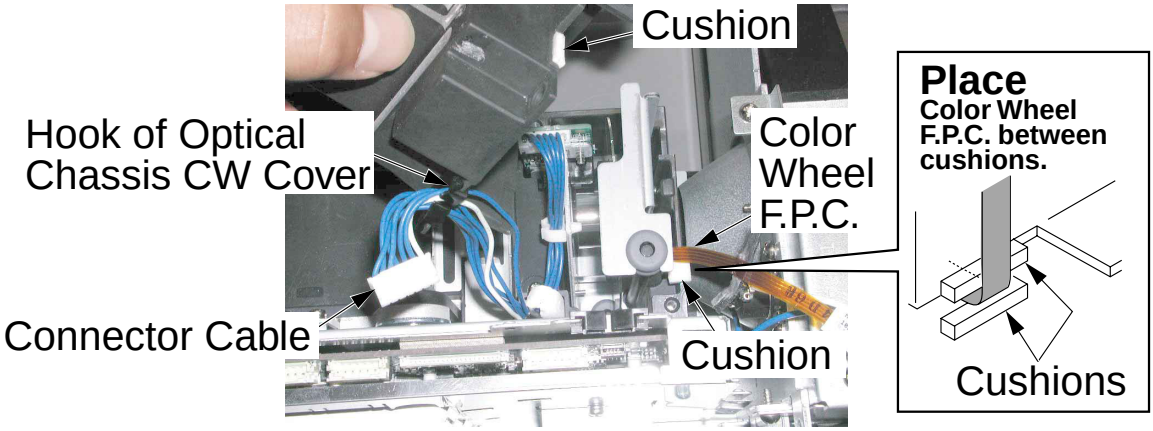



Fig. P2-3

3) Hook and connect the Color Wheel F.P.C. to Connector PL3 so that the connecting terminal is facing front as shown below. Then, hook and connect the Connector Cable to Connector PL2.

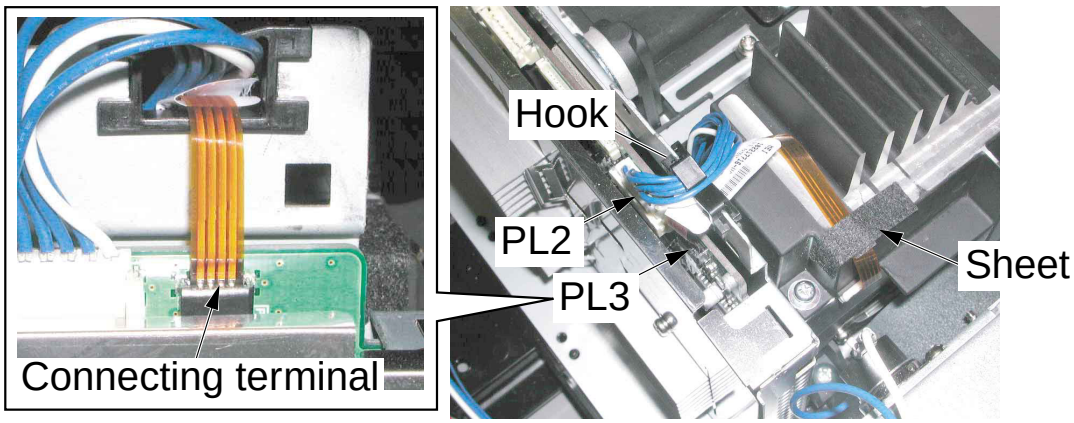



Fig. P2-4

4) Place the Sheet on the Color Wheel F.P.C. (It is not necessary to place for servicing.)
5) After installing the Color Wheel Unit, be sure to perform the "Color Wheel Index Delay" adjustment.
6) Check the white balance on the screen. If NG, perform the "White Balance" adjustment.

## REMOVAL OF THE BALLAST C.B.A.

1. 1) Remove the Lamp by loosening the Screw.
   2) Remove the 2 Screws (421), disconnect the Lamp Connector and release from the hook.
   3) Remove the Ballast C.B.A. after releasing the 4 latch tabs.

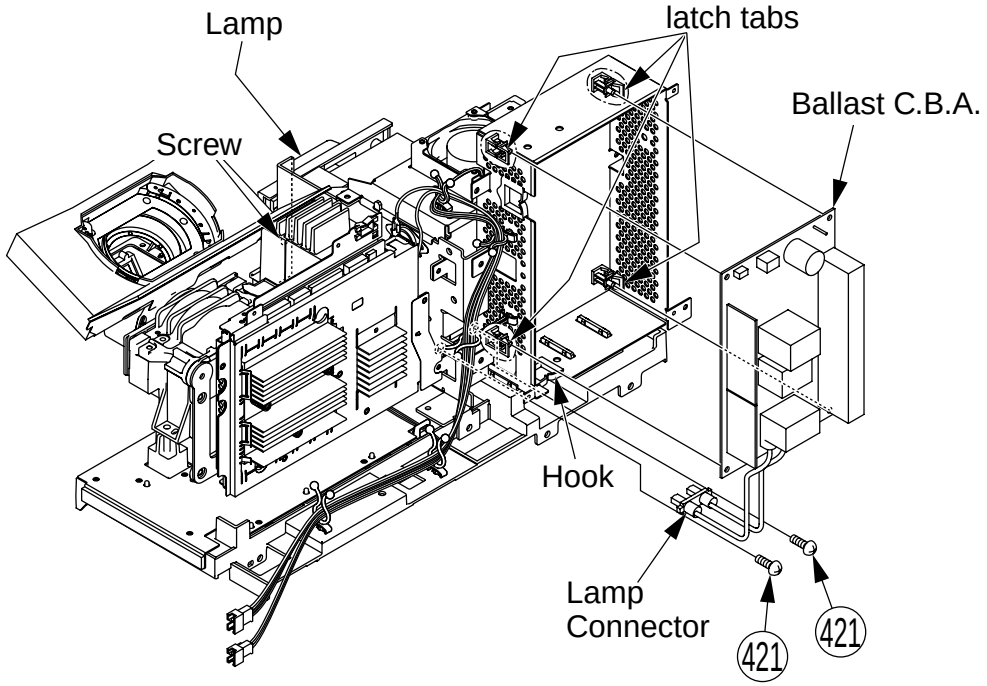



Fig. P3

# 6 ADJUSTMENT PROCEDURES 1

## WHEN INSTALLING THE BASE BODY UNIT INTO THE UNIT AT THE USER'S LOCATION:

The following adjustments of the Optical Block Unit must be performed.

a. Focus Adjustment
   **Note:**
   Perform this adjustment only if necessary. (Normally, it will not be necessary.)
b. Mechanical Picture Position Adjustment (Tilt)
c. Electrical Picture Position Adjustment

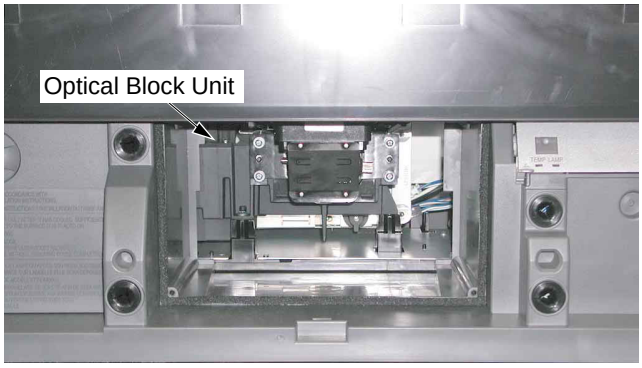
## WHEN INSTALLING THE OPTICAL BLOCK UNIT INTO THE UNIT AT THE USER'S LOCATION:

The following adjustments of the Optical Block Unit must be performed.

a. Focus Adjustment
   **Note:**
   Perform this adjustment only if necessary. (Normally, it will not be necessary.)
b. Mechanical Picture Position Adjustment (Tilt)
c. Electrical Picture Position Adjustment
d. Copying the adjustment data of the Optical Block Unit to EEPROM IC on the Main C.B.A. (Circuit Board DG)
e. Verifying the Color Wheel Index Delay and the white balance on the screen

**Adjustment Preparations:**

1. Install all parts except the Front Cover Unit and the Optical Cover.




(With Front Cover Unit and Optical Cover removed)
**<Front View>**

Fig. M1-1

**Note:**
When the rear cover is disassembled, the screen can be moved back and forth, which could affect the video display vertical position. This could also cause the vertical adjust to be at or near its limit.
Only try the picture position adjustment with the rear cover assembled!

2. Turn the power on.
3. Press and hold the VOLUME DOWN button on the unit and the RECALL key on the remote for more than 5 seconds in power on condition. The unit will go into Work Mode. ("WORK MODE" will appear on the screen.)
4. 1) Press and hold the VOLUME DOWN button on the unit and the SWAP key on the remote for more than 1 second. The unit will go into the Factory Adjust Mode. (FACTORY ADJUST menu will appear.)

```
     FACTORY ADJUST     1/1
M:2.020
  VIDEO ADJ
  SOUND
  FAN
  OTHER
  PARTIAL
  DT BOARD

  EEP COPY L->DG
  DEFAULT SET
```

**<Factory Adjust Mode>**

Fig. M1-3

2) Press the CH UP/DOWN key on the remote to select "OTHER" on menu and press the OK key. (OTHER menu will appear.)

```
          OTHER              1/1

OPT HPOSI          8000
OPT VPOSI          8000
CW INDEX DELAY 00ED
WB                 00
DDP
GC:05071401
```

**<Factory Adjust Mode>**
**(OTHER menu 1/1)**

Fig. M1-4

**To release this mode:**

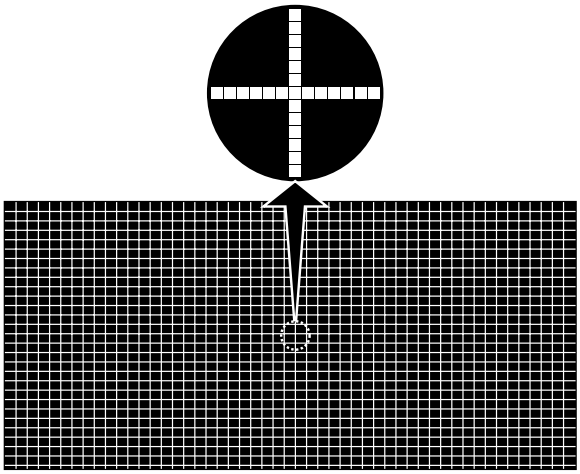
1. After completing the adjustments, press the CH UP/DOWN key on the remote to return to the OTHER menu.
2. Press the RECALL key twice to return to Work Mode, and press and hold the VOLUME DOWN button on the unit and the RECALL key on the remote for more than 5 seconds. Or, turn off the power.
3. Install the Optical Cover with the 2 Screws and the Front Cover Unit.

**CAUTION:**

Be sure to perform the Focus Adjustment after turning on the power for between 1 and 30 minutes.

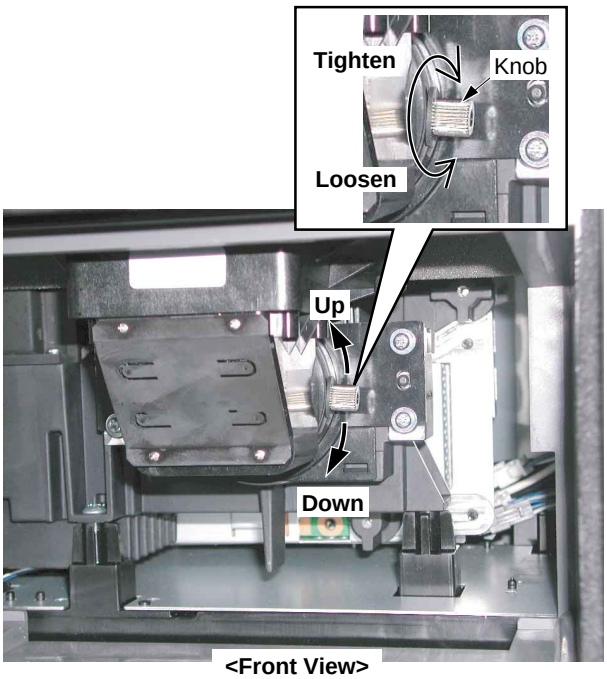
## a. Focus Adjustment

1) Press the CH UP/DOWN key on the remote to select "DDP" on menu and press the ASPECT key 5 times to select "Cross hatch".
2) Confirm that each of the pixels in the center are clearly visible.



**<Cross hatch>**

3) If not, loosen the Knob on the Projection Lens until the Knob can be moved.




**<Front View>**

Fig. M1-5

4) Adjust the Knob by moving up or down so that each of the pixels in the center are clearly visible to obtain the best focus.
5) Tighten the Knob.

**Note:**

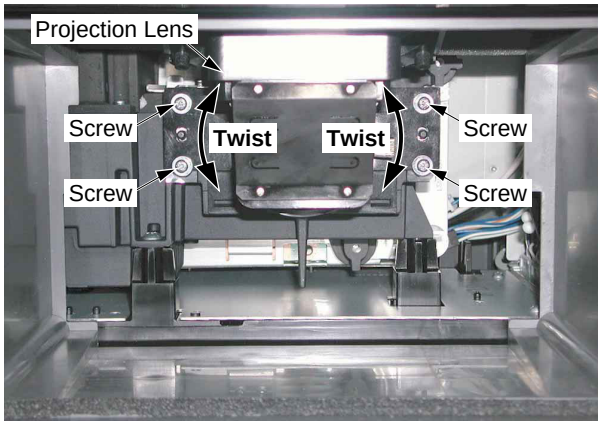
Focus Adjustment is not normally necessary. Perform this adjustment only if necessary.

## b. Mechanical Picture Position Adjustment (Tilt)

1) Press the CH UP/DOWN key on the remote to select "OPT HPOSI" on menu and press the VOLUME UP/ DOWN key on the remote.


**<Focus Screen>**

2) Loosen the 4 Screws on the Optical Block Unit.

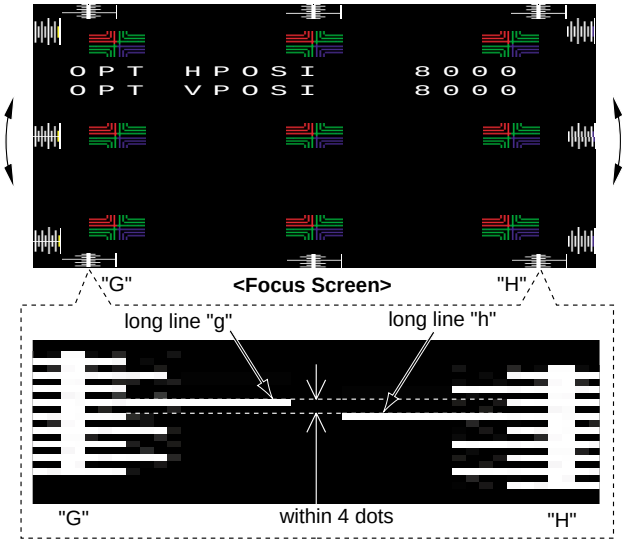



**<Front View>**

Fig. M1-6

4) Adjust the Projection Lens by twisting so that the long line "g" and the long line "h" are within 4 dots. (The long line "g" and the long line "h" should be aligned horizontally.)

**Note:**

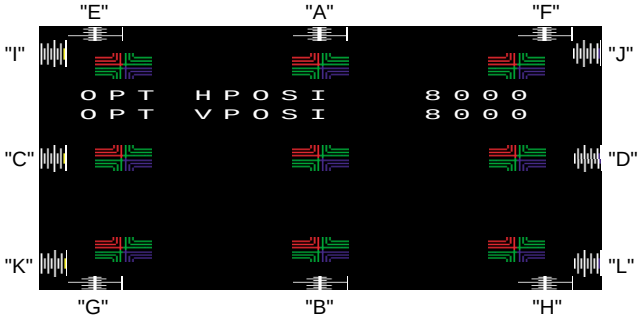



If the Projection Lens is twisted left, the Focus Screen twists left.
If the Projection Lens is twisted right, the Focus Screen twists right.

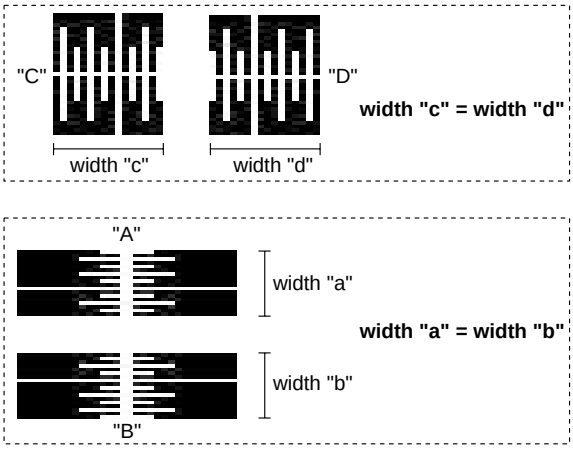
5) Tighten the 4 Screws to fix the Projection Lens.

## c. Electrical Picture Position Adjustment

1) Adjust OPT HPOSI so that "C" is symmetrical to "D" by pressing the VOLUME UP/DOWN key on the remote to change the value.
2) Press the CH UP/DOWN key on the remote to return to the OTHER menu.
3) Select OPT VPOSI by pressing CH UP/DOWN key on the remote.
4) Adjust OPT VPOSI so that "A" is symmetrical to "B" by pressing the VOLUME UP/DOWN key on the remote to change the value.




**<Focus Screen>**




5) Confirm that all "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L" are each symmetrical.
6) If not, adjust the "OPT HPOSI" and "OPT VPOSI" (repeat steps 1-6) until the picture is in the correct position.
7) Press the CH UP/DOWN key on the remote to return to the OTHER menu.

## d. Copying the adjustment data of the Optical Block Unit to EEPROM IC on the Main C.B.A. (Circuit Board DG)

1) Press the CH UP/DOWN key on the remote to select "EEP COPY L->DG" on menu.

```
     FACTORY ADJUST     1/1
M:2.020
  VIDEO ADJ
  SOUND
  FAN
  OTHER
  PARTIAL
  DT BOARD

  EEP COPY L->DG
  DEFAULT SET
```

**<Factory Adjust Mode>**

Fig. M1-7

2) Press the OK key for more than 3 seconds. "OK" will appear for 5 seconds. The adjustment data of the Optical Block Unit will copy to EEPROM IC on the Main C.B.A. (Circuit Board DG).

```
     FACTORY ADJUST     1/1
M:2.020
  VIDEO ADJ
  SOUND
  FAN
  OTHER
  PARTIAL
  DT BOARD

  EEP COPY L->DG OK
  DEFAULT SET
```

**<Factory Adjust Mode>**

Fig. M1-8

## e. Verifying the Color Wheel Index Delay and the white balance on the screen

1) Display the internal pattern for "Color Wheel Index Delay" in Factory Adjust Mode.
   If required, perform the "Color Wheel Index Delay" adjustment.
2) Check the white balance on the screen. If required, perform the "White Balance" adjustment.

# 7 ADJUSTMENT PROCEDURES 2

# ADJUSTMENT PROCEDURES 2

## INITIAL GUIDELINES

The table below shows which adjustments are necessary according to the unit parts and individual parts to be replaced. Make sure to perform these adjustments shown below as necessary.

| Adjustment Item | | Adjustment data is written to following EEPROM IC | Replacement Parts: Optical Blcok Unit (Ref No. 21) | Replacement Parts: Color Wheel Unit (Ref No. 235) |
|---|---|---|---|---|
| **Color Wheel Section** | Color Wheel Index Delay Adjustment *3 | IC1101 on Main C.B.A. (Circuit Board DG) | ○ | ○ |
| | White Balance Adjustment *3 | IC1101 on Main C.B.A. (Circuit Board DG) | △ *2 | △ *2 |

**Note:**

1. ◯ : Adjustment Item

*2. △ : Check the picture on the screen. If OK, the adjustment is not necessary.

*3. The adjustment data of "Color Wheel Index Delay" and "White Balance" will be written to EEPROM IC (IC1101) on the Main C.B.A. (Circuit Board DG). Therefore, be sure to perform these adjustment **at the user's location**.

Fig. E1-1

**Perform the necessary adjustments according to the following flow chart.**

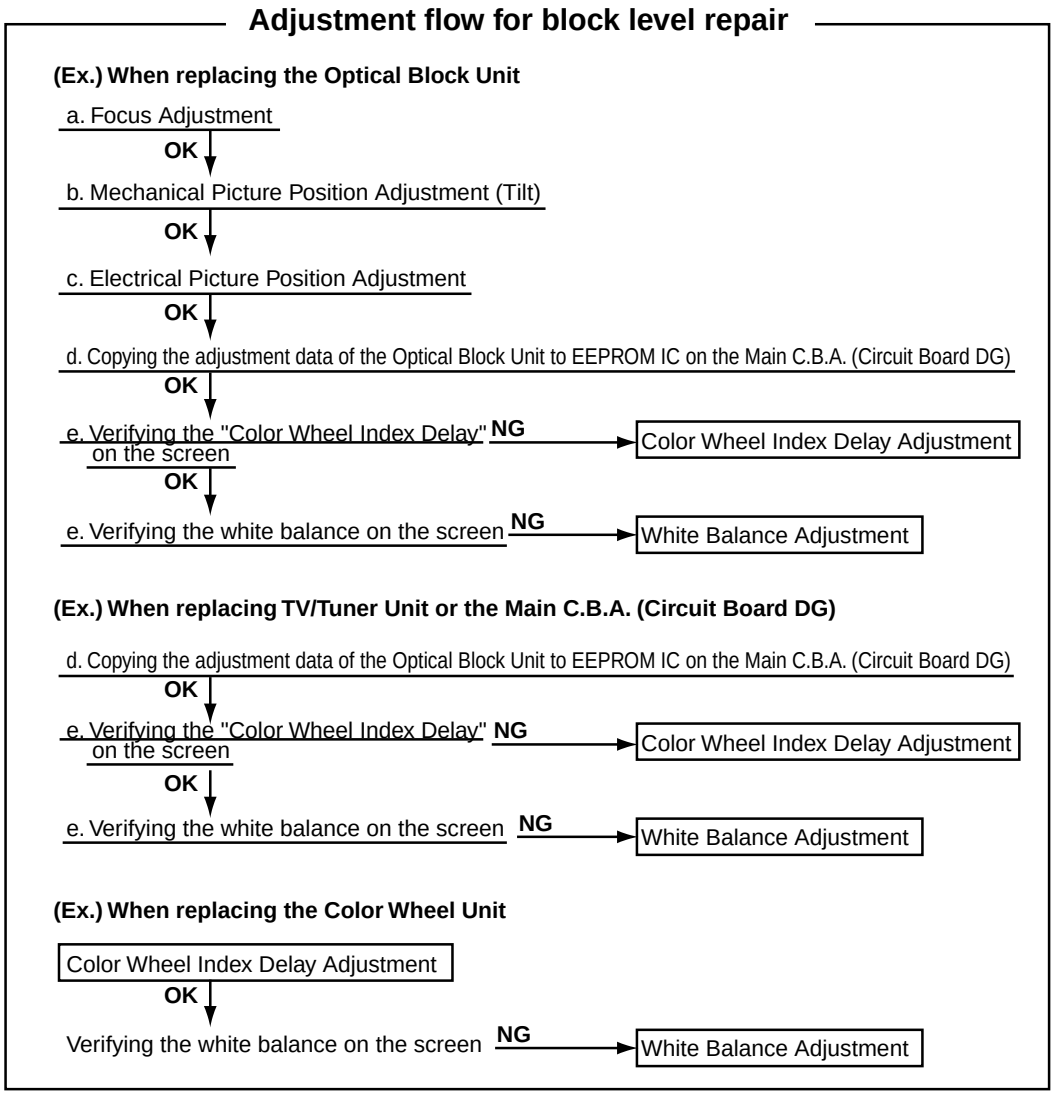
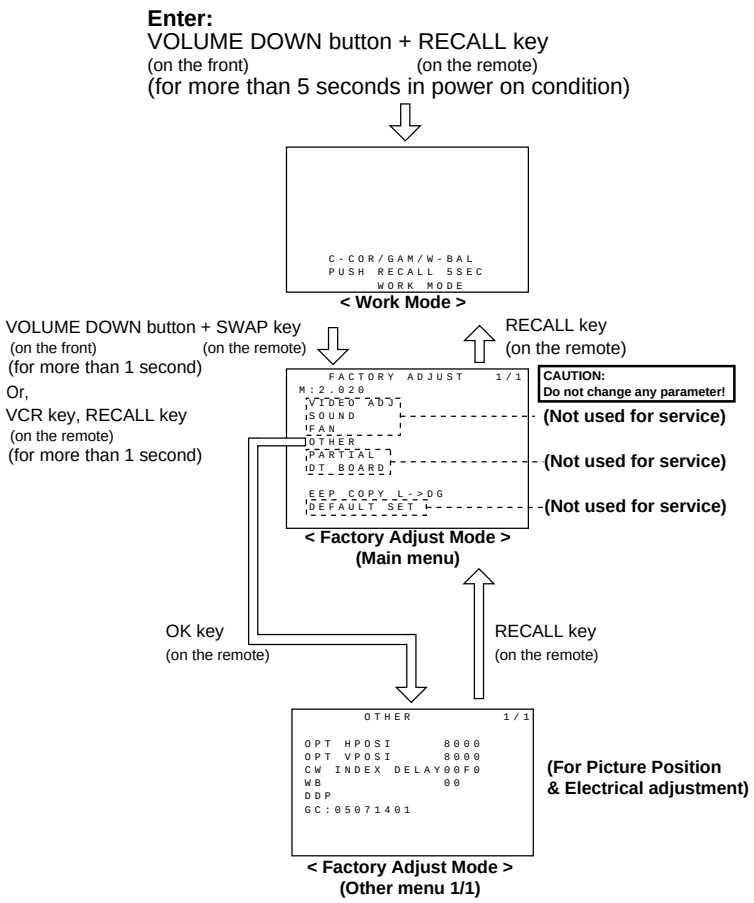



Fig. E1-2

## WORK MODE AND FACTORY ADJUST MODE

### Work Mode Map




**Factory Adjust Mode**

This mode is required when:

- Performing Focus, Mechanical Picture Position, Electrical Picture Position, Color Wheel Index Delay and White Balance adjustments [Other menu].
- Copying the Color Wheel Index Delay and White Balance adjustment data stored in EEPROM IC on the DMD Drive C.B.A. (Circuit Board L) to EEPROM IC on the Main C.B.A. (Circuit Board DG) [Main menu].

**To enter the Factory Adjust Mode:**

1) In Work Mode, press and hold the VOLUME DOWN button on the unit and the SWAP key on the remote together for more than 1 second. The unit will go into Factory Adjust Mode. ("FACTORY ADJUST" will appear on the screen.)
2) Press the CH UP/DOWN key to select and press the OK key to set the item to be adjusted.
3) After completing adjustments, press the RECALL key twice to return to Work Mode.
   The adjustment data will be written to the EEPROM IC (IC1101) on the Main C.B.A. (Circuit Board DG).

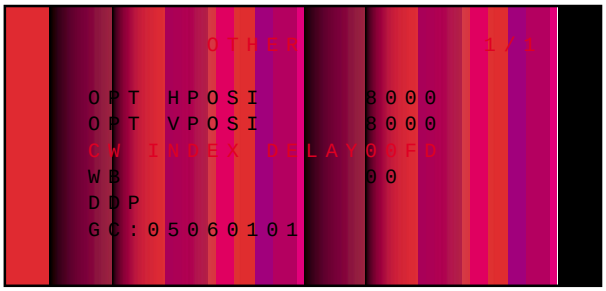
**Note:**

**Do not unplug the AC Cord in Factory Adjust Mode or the adjustment data will not be written to the EEPROM IC.**

# COLOR WHEEL INDEX DELAY ADJUSTMENT

**Purpose:**
To set the standard color index.

**Symptom of Misadjustment:**
Many vertical stripes will appear.

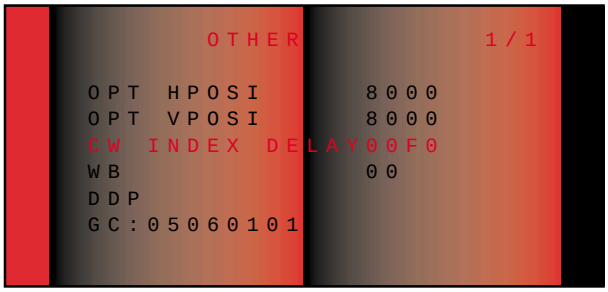



**<Red ramp pattern>**

**SET UP:**
1. Install the Optical Block Unit into the Cabinet.
2. Enter Work Mode. Then, enter Factory Adjust Mode.
3. Press the CH UP/DOWN key on the remote to select "OTHER" on menu and press the OK key. (OTHER menu will appear.)
4. Press the CH UP/DOWN key on the remote to select "CW INDEX DELEY" on menu and press the ASPECT key once to select "Red ramp pattern."

**To release this mode:**
1. After completing the adjustment, press the CH UP/DOWN key on the remote to return to the OTHER menu.
2. Then, press RECALL key twice to return to Work Mode, and press and hold the VOLUME DOWN button on the unit and the RECALL key on the remote for more than 5 seconds. Alternatively, turn off the power.

1. Display the Red100% ramp pattern by pressing the ASPECT key.
2. Adjust "CW INDEX DELAY" value by pressing the VOLUME UP/DOWN key so that red ramp pattern is even, with no discoloration.




**<Red ramp pattern>**

Fig. E5-1

3. Display the Green100% ramp pattern by pressing the ASPECT key.
4. Confirm the green ramp pattern is even, with no discoloration. If not, adjust "CW INDEX DELAY" value by pressing the VOLUME UP/DOWN key.


**<Green ramp pattern>**

Fig. E5-2

5. Display the Blue100% ramp pattern by pressing the ASPECT key.
6. Confirm the blue ramp pattern is even, with no discoloration. If not, adjust "CW INDEX DELAY" value by pressing the VOLUME UP/DOWN key.


**<Blue ramp pattern>**

Fig. E5-3

7. Repeat the above steps until all patterns are even, with no discoloration.

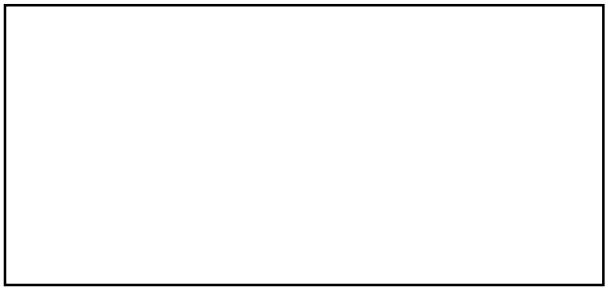
**Note:**
After this adjustment, do not copy using the EEP COPY L->DG in the Factory Adjust Mode.
Otherwise, the factory default data of the Optical Block Unit will be copied to EEPROM IC on the Main C.B.A. (Circuit Board DG), and re-adjustment will be necessary.

## WHITE BALANCE ADJUSTMENT (Selection of White Balance data)

**Note:**
Be sure to perform the White Balance Adjustment after turning on the power for more than 3 minutes so that color temperature is stable.

**Purpose:**
To set the standard white level for color temperature.

**Symptom of Misadjustment:**
White color of picture will become bluish or reddish.



**<100% White signal>**

**SET UP:**
1. Install the Optical Block Unit into the Cabinet.
2. 1) Press MENU key with the power on.
   2) Set the following setting in Picture menu.
   - Pic. Mode to "Standard"
   - Color Temp to "Normal"
3. Enter Work Mode. Then, enter Factory Adjust Mode.
4. Press the CH UP/DOWN key on the remote to select "OTHER" on menu and press the OK key. (OTHER menu will appear.)
5. Supply 100% White Signal using a video pattern generator. Then, set to VIDEO 1 mode by pressing the TV/VIDEO key.
1. Press the CH UP/DOWN key on the remote to select "WB" on menu.
2. Select "WB" value (00 ~ 05) by pressing VOLUME UP/ DOWN key so that the white color of screen is standard.

| WB | color | Color temperature |
|---|---|---|
| 00 | factory default | |
| 01 | reddish | low |
| 02 | ↑ | ↑ |
| 03 | (middle) | (middle) |
| 04 | ↓ | ↓ |
| 05 | bluish | high |

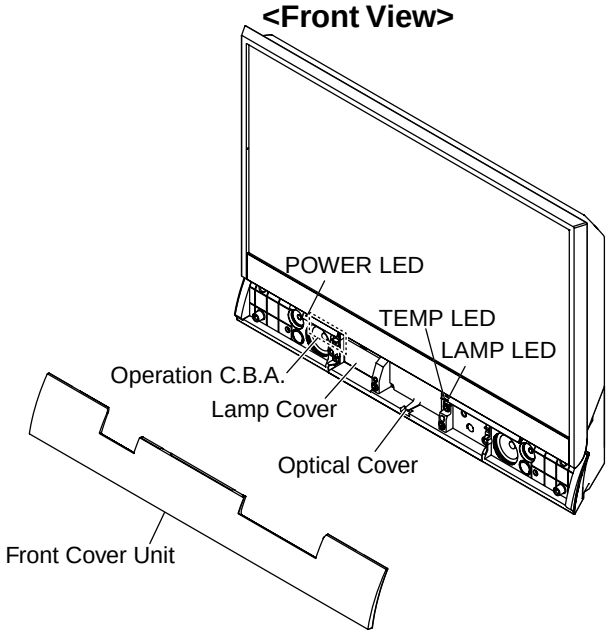
**Note:**
If the screen looks bluish, select 01.
If the screen looks reddish, select 05.

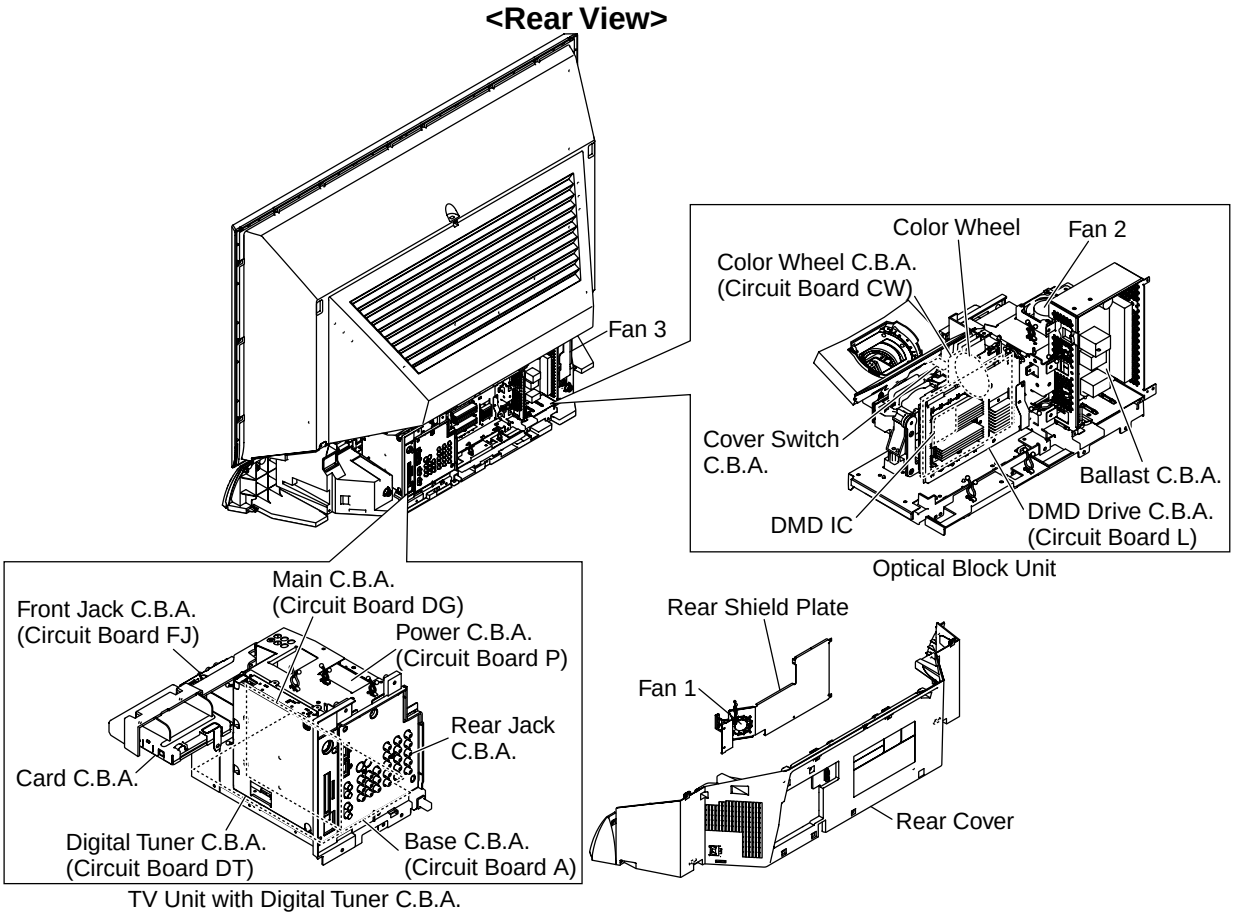
**Note:**
After this adjustment, do not copy using the EEP COPY L->DG in the Factory Adjust Mode.
Otherwise, the factory default data of the Optical Block Unit will be copied to the EEPROM IC on the Main C.B.A. (Circuit Board DG), and re-adjustment will be necessary.

# 8 TROUBLESHOOTING HINTS

## 8.1. TROUBLESHOOTING HINTS FOR BLOCK LEVEL REPAIR

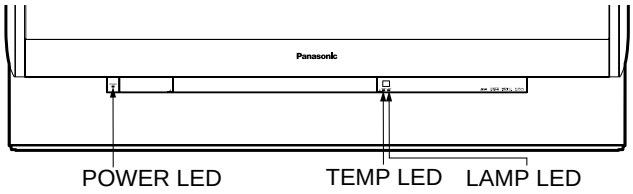
### MAIN PARTS LOCATION



## LED INDICATIONS FOR ERROR CONDITION

Each LED indication facilitates finding the cause of an error.
When an error is detected, the Lamp turns off and an LED on the front will flash.

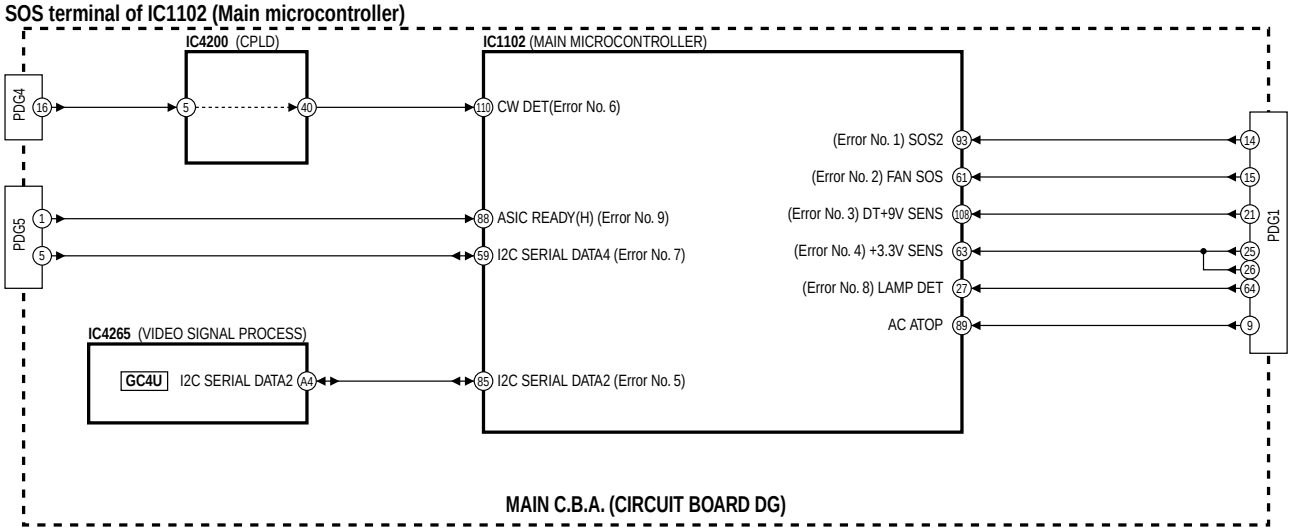



| | | | | | (Note 1, 3) | (Note 2) | |
|---|---|---|---|---|---|---|---|
| Error No. | Error Information | POWER LED | TEMP LED | LAMP LED | SOS | LAMP OFF | RESET |
| 1) | SOS2 (Over Voltage) | flashes orange once every 5 seconds | - | - | H10SOS2 | ○ | AC ON/OFF |
| 2) | Fan1, Fan2 or Fan3 stopped | flashes orange twice every 5 seconds | - | - | H20FANST | ○ | |
| 3) | Abnormal Voltage (+9V line) | flashes orange 3 times every 5 seconds | - | - | H30DT9V | ○ | |
| 4) | Abnormal Voltage (+3.3V line) | flashes orange 4 times every 5 seconds | - | - | H40 3.3V | ○ | |
| 5) | IC4265 (GC4U) communication Error | flashes orange 5 times every 5 seconds | - | - | H50GC4U | ○ | |
| 6) | Abnormal Color Wheel rotation | flashes orange 6 times every 5 seconds | - | - | H60CWSTP | ○ | |
| 7) | Abnormal Temperature | - | flashes twice every 1 second | - | - | ○ | Power ON/OFF |
| 8) | Abnormal Lamp | - | - | flashes twice every 1 second | - | ○ | |
| 9) | IC6004 (DMD Control) ASIC READY is incomplete | flashes orange 8 times every 5 seconds | - | - | H80ASCRY | ○ | |

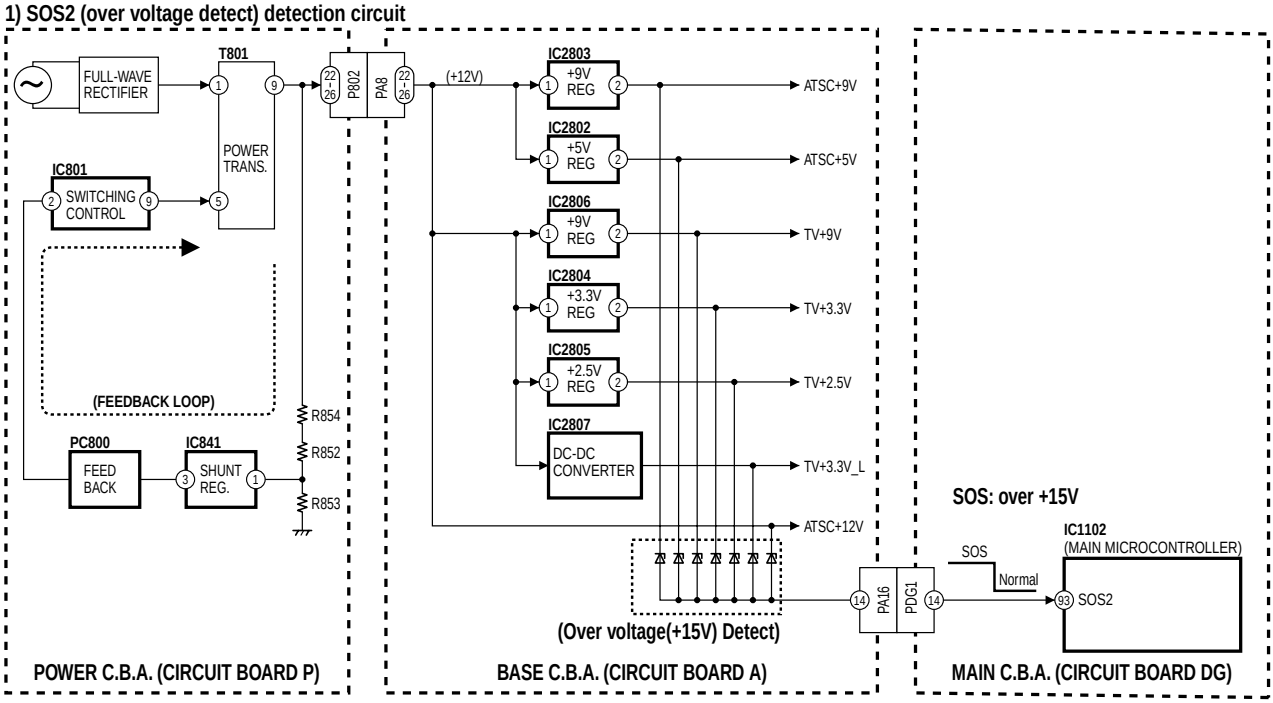
**Note:**
1. When more than one error has occurred at the same time in SOS (Error), the POWER LED will flash one pattern only according to priority 1) 3) 2) 4) 5) 6) 9).
2. LAMP OFF: The LED will flash immediately after the Lamp goes off.
3. The detected SOS (Error 1)~6), 9)) data will be stored in the EEPROM.

## Protection circuit

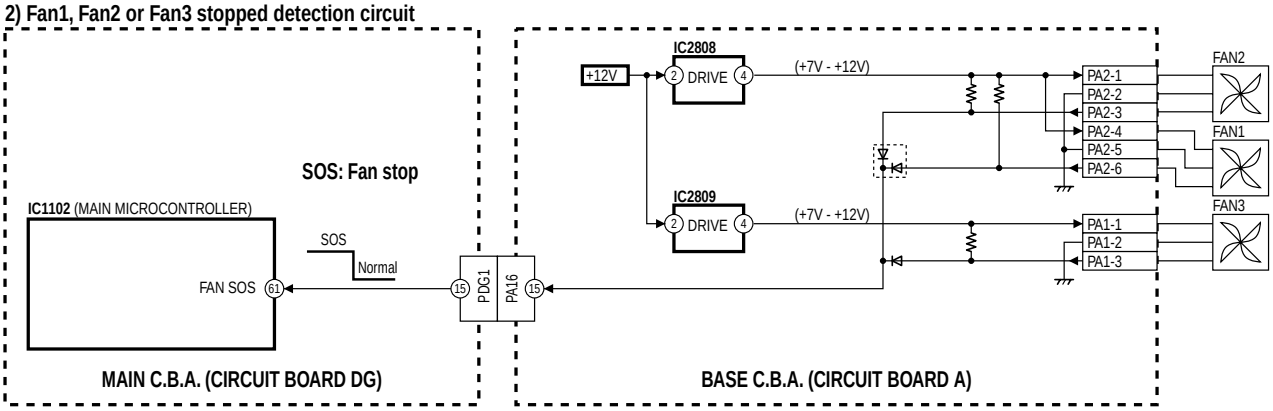
**SOS terminal of IC1102 (Main microcontroller)**



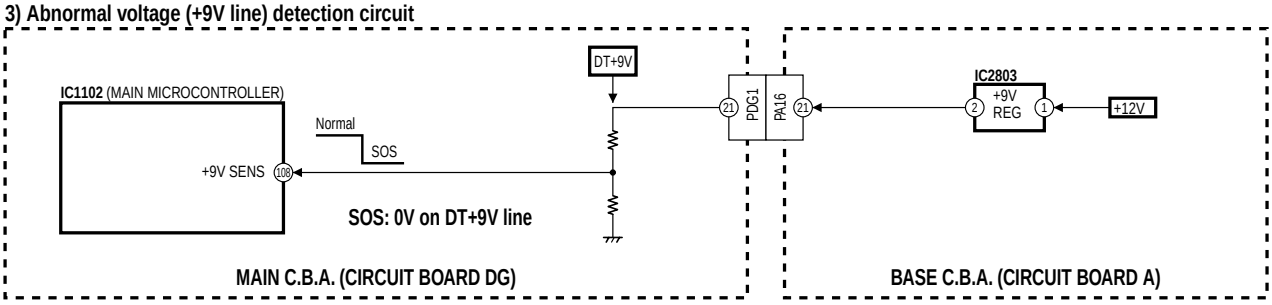

**1) SOS2 (over voltage detect) detection circuit**



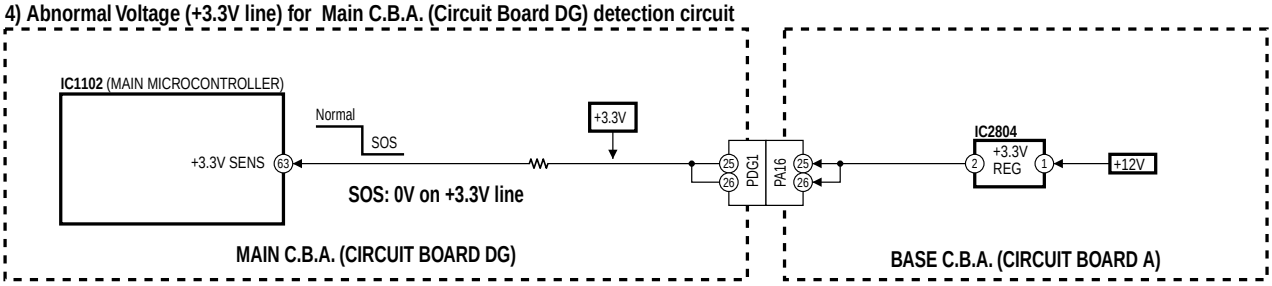

**2) Fan1, Fan2 or Fan3 stopped detection circuit**



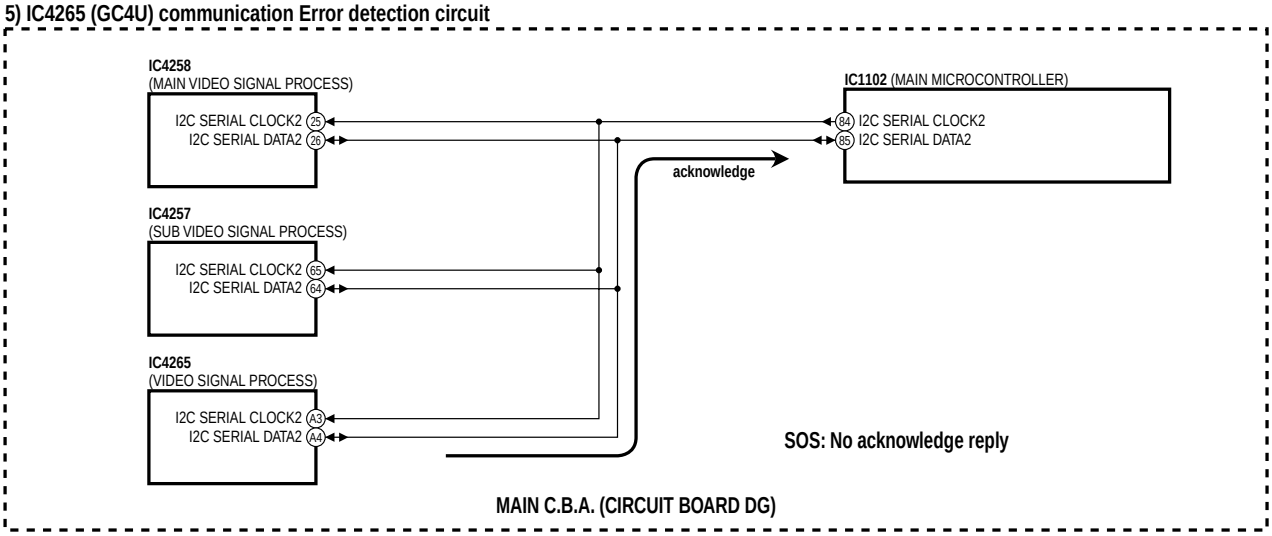
### 3) Abnormal voltage (+9V line) detection circuit



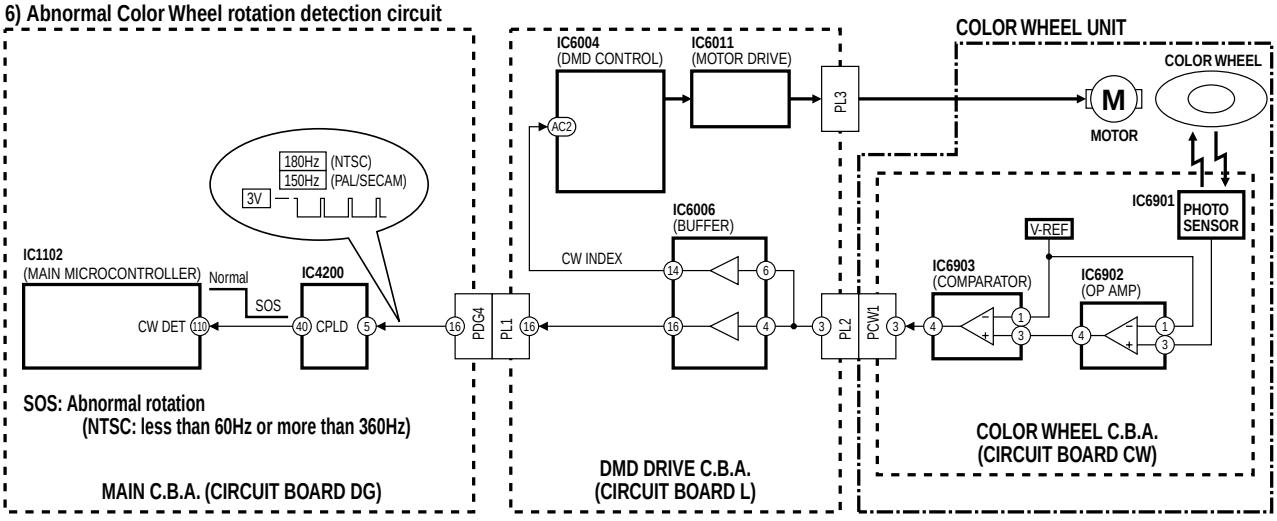

### 4) Abnormal Voltage (+3.3V line) for Main C.B.A. (Circuit Board DG) detection circuit



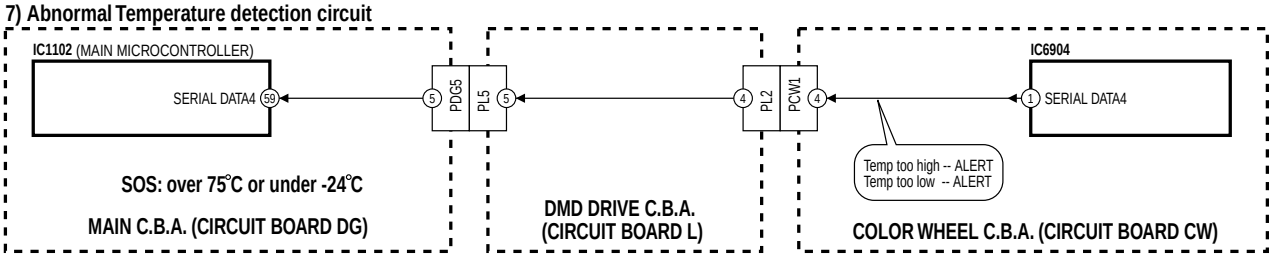

### 5) IC4265 (GC4U) communication Error detection circuit



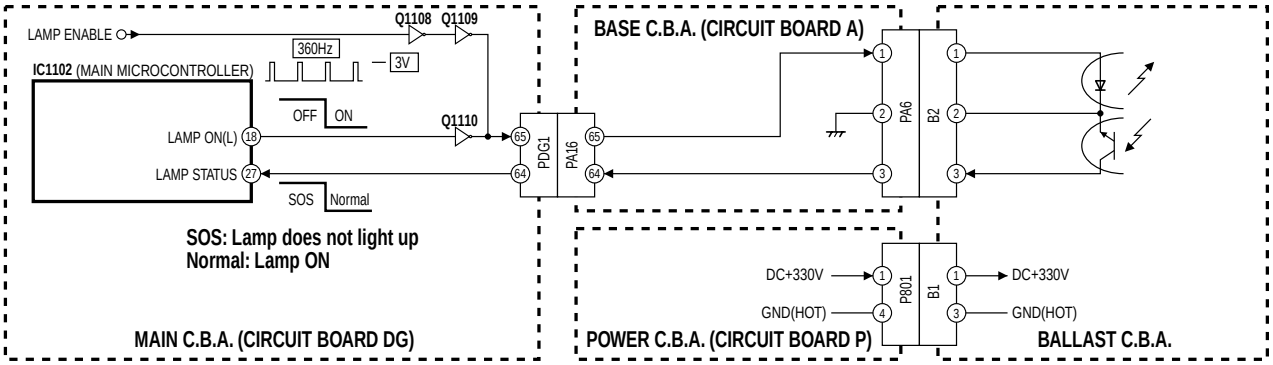

### 6) Abnormal Color Wheel rotation detection circuit



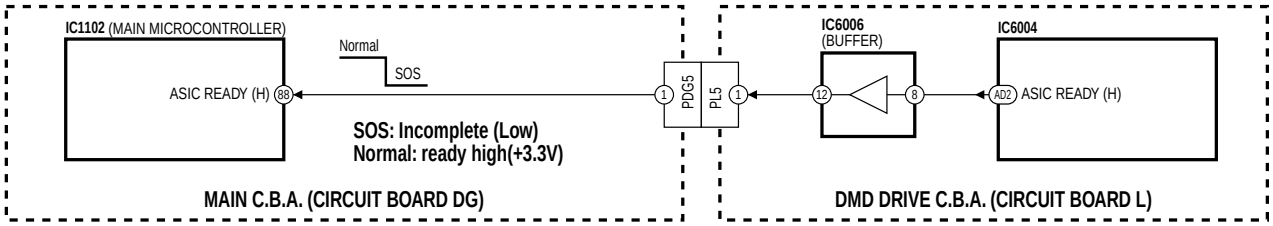
**7) Abnormal Temperature detection circuit**



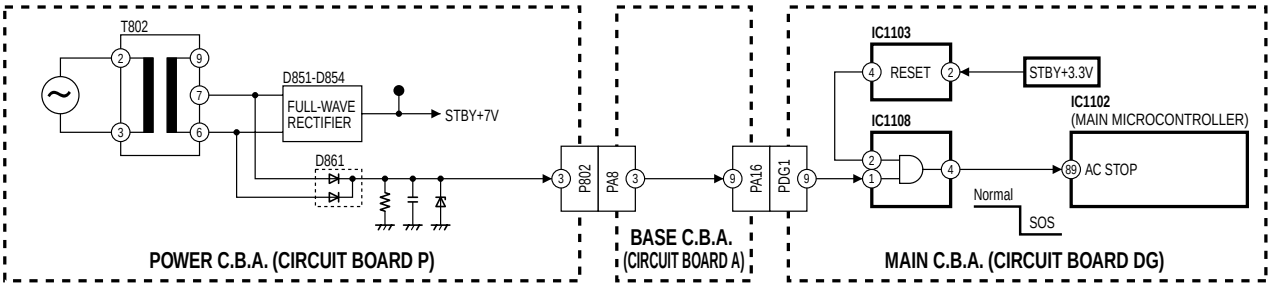

**8) Abnormal Lamp detection circuit**



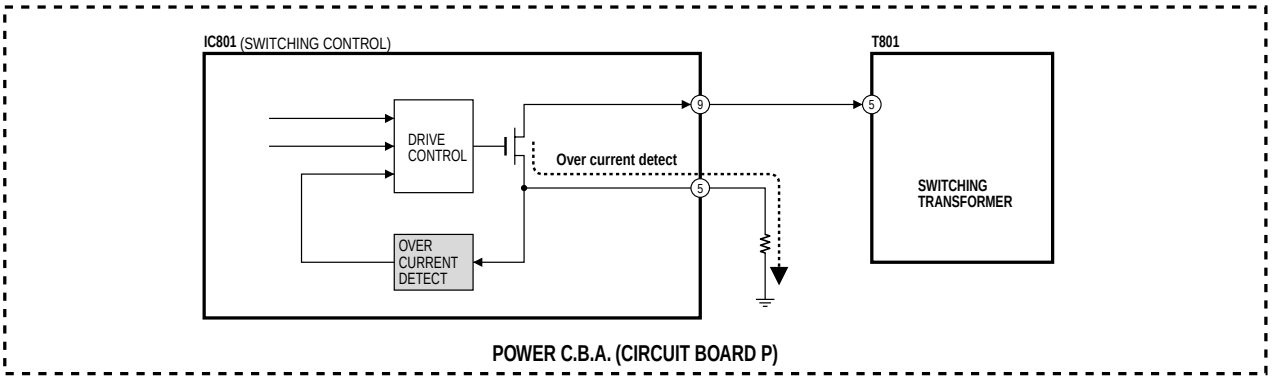

**9) IC6004 (DMD Control) ASIC READY is incomplete detection circuit**



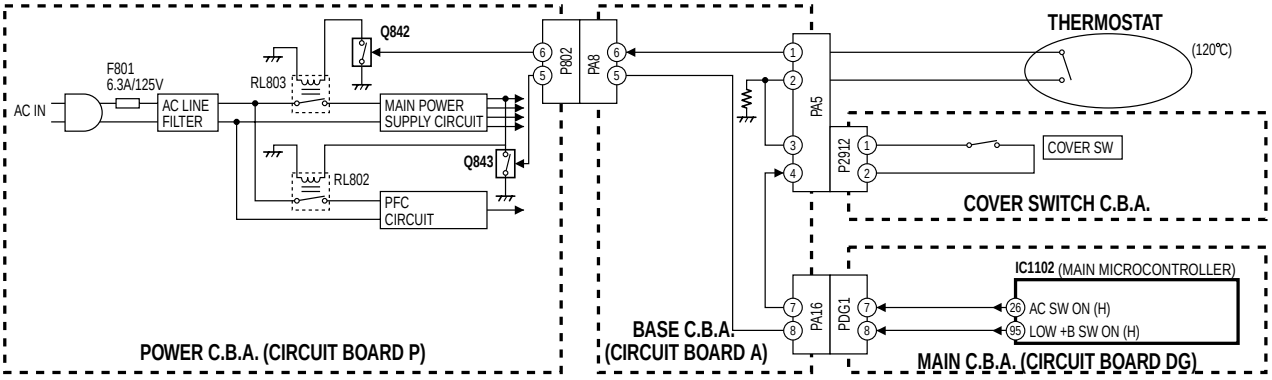
● **AC stop detection circuit**




● **Over current detection circuit**



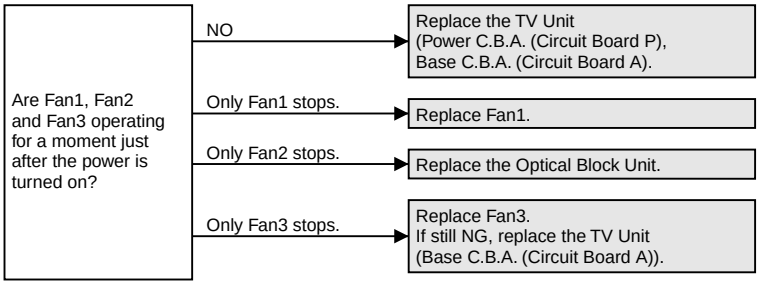

● **Abnormal Temperature (Thermostat) and Lamp Cover open detection circuit (shut down circuit)**



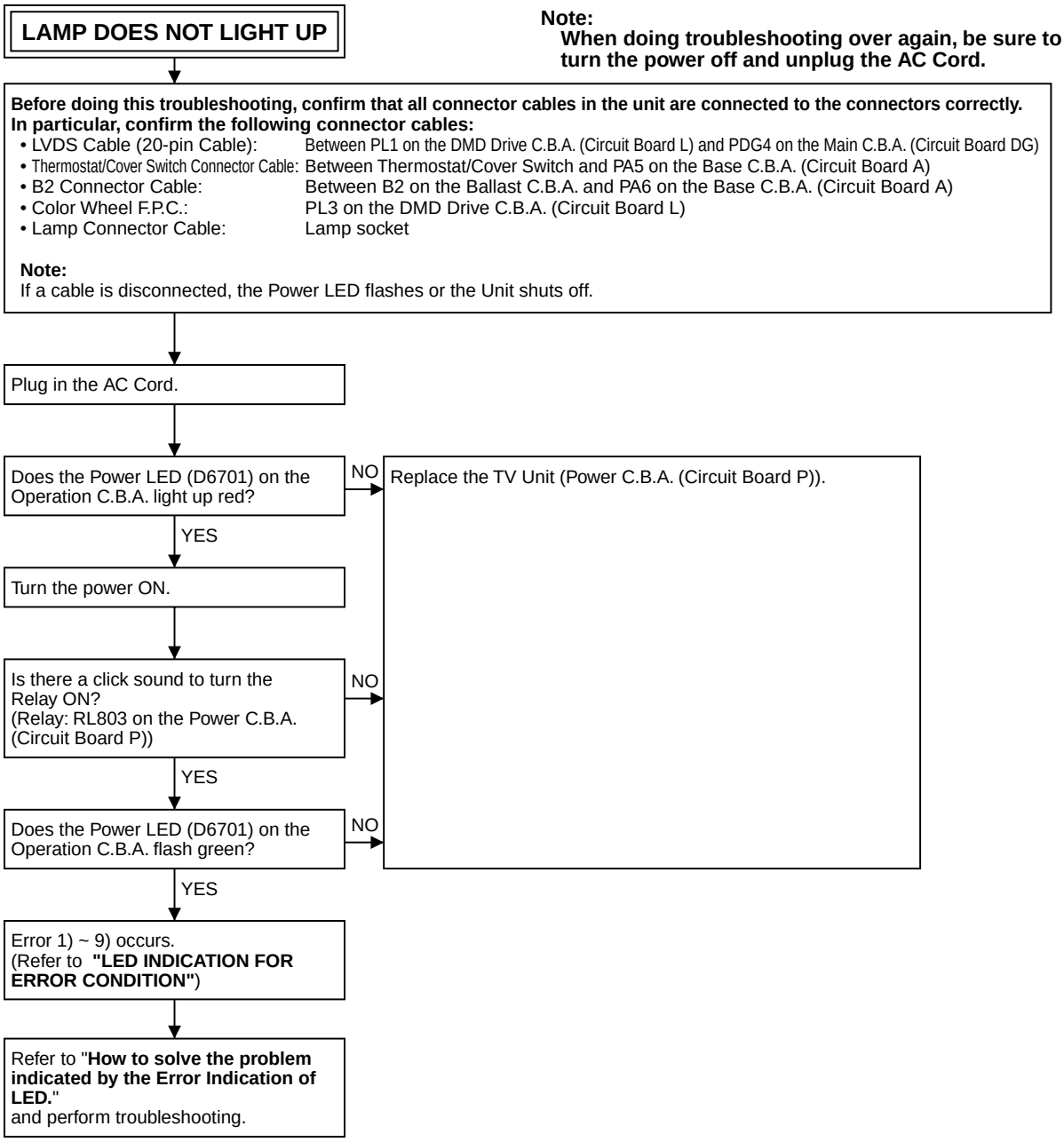
# How to solve the problem indicated by the Error Indication of LED

(The symptom of all errors is that Lamp turns off or Lamp does not light up)

**Note: Before performing the troubleshooting, confirm that all connector cables in the unit are connected correctly.**

| Error No. | Problem | Possible Solution |
|---|---|---|
| **1)** | Following voltage lines on the Base C.B.A. (Circuit Board A) is over voltage (more than +15V).<br>• ATSC+12V line<br>• ATSC+5V line<br>• ATSC+9V line<br>• TV+9V line<br>• TV+3.3V line<br>• TV+2.5V line<br>• TV+3.3V_L line | Replace the TV Unit (Power C.B.A. (Circuit Board P)). |
| **2)** | Cooling Fan (Fan1, Fan2 and/or Fan3) malfunctions. |  |
| **3)** | DT+9V line on the Main C.B.A. (Circuit Board DG) error. | Replace the TV Unit (Base C.B.A. (Circuit Board A), Power C.B.A. (Circuit Board P) or Digital Tuner C.B.A. (Circuit Board DT)). |
| **4)** | +3.3V line on the Main C.B.A. (Circuit Board DG) error. | Replace the TV Unit (Base C.B.A. (Circuit Board A), Power C.B.A. (Circuit Board P) or Main C.B.A. (Circuit Board DG)). |
| **5)** | Communication error $I^2C$ SERIAL DATA for between IC1102 (Pin 85) and IC4265 (Pin A4) on the Main C.B.A. (Circuit Board DG) | Replace the TV Unit (Main C.B.A. (Circuit Board DG)). |
| **6)** | Color Wheel rotation error. | 1. Replace the Color Wheel Unit.<br>2. Replace the Optical Block Unit.<br>3. Replace the TV Unit (Main C.B.A. (Circuit Board DG)). |
| **7)** | Abnormal temperature (more than 75 ˚C or less than -24 ˚C) of the THERMOSTAT near the Lamp. | 1. Relocate the unit to a proper location.<br>• Do not place in direct sunlight and other sources of direct heat.<br>• Do not place the unit in humid or dusty location, or areas exposed to smoke or steam. (surrounding temperature should be between 0 ˚C (32 ˚F) and 35 ˚C (95 ˚F) and humidity should be between 20 % and 80 % (with no condensation).)<br>• The vents are not blocked. It is recommended that a gap of at least 10 cm is left all around the unit even when it is placed inside a cabinet or between shelves.<br>2. Check if the fans are operating properly. |
| **8)** | 1. The Lamp is defective (crack).<br>2. The Ballast C.B.A. is defective.<br>3. The Power C.B.A. (Circuit Board P) is defective.<br>4. The Main C.B.A. (Circuit Board DG) is defective.<br>5. The DMD Drive C.B.A. (Circuit Board L) is defective. | 1. Wait until the Lamp is cooled off and try to turn the power back on. If same error LED indication continues, remove the Lamp and visually inspect it. If it is cracked, it must be replaced.<br>2. Replace the Ballast C.B.A.<br>3. Replace the TV Unit (Power C.B.A. (Circuit Board P) or Main C.B.A. (Circuit Board DG)).<br>4. Replace the Optical Block Unit. |
| **9)** | Communication error between IC1102 (Main Microcontroller) and IC6004 (DMD Control) on the DMD Drive C.B.A. (Circuit Board L) | 1. Replace the Optical Block Unit.<br>2. Replace the TV Unit (Main C.B.A. (Circuit Board DG)). |

**Note:**
**When doing troubleshooting over again, be sure to turn the power off and unplug the AC Cord.**



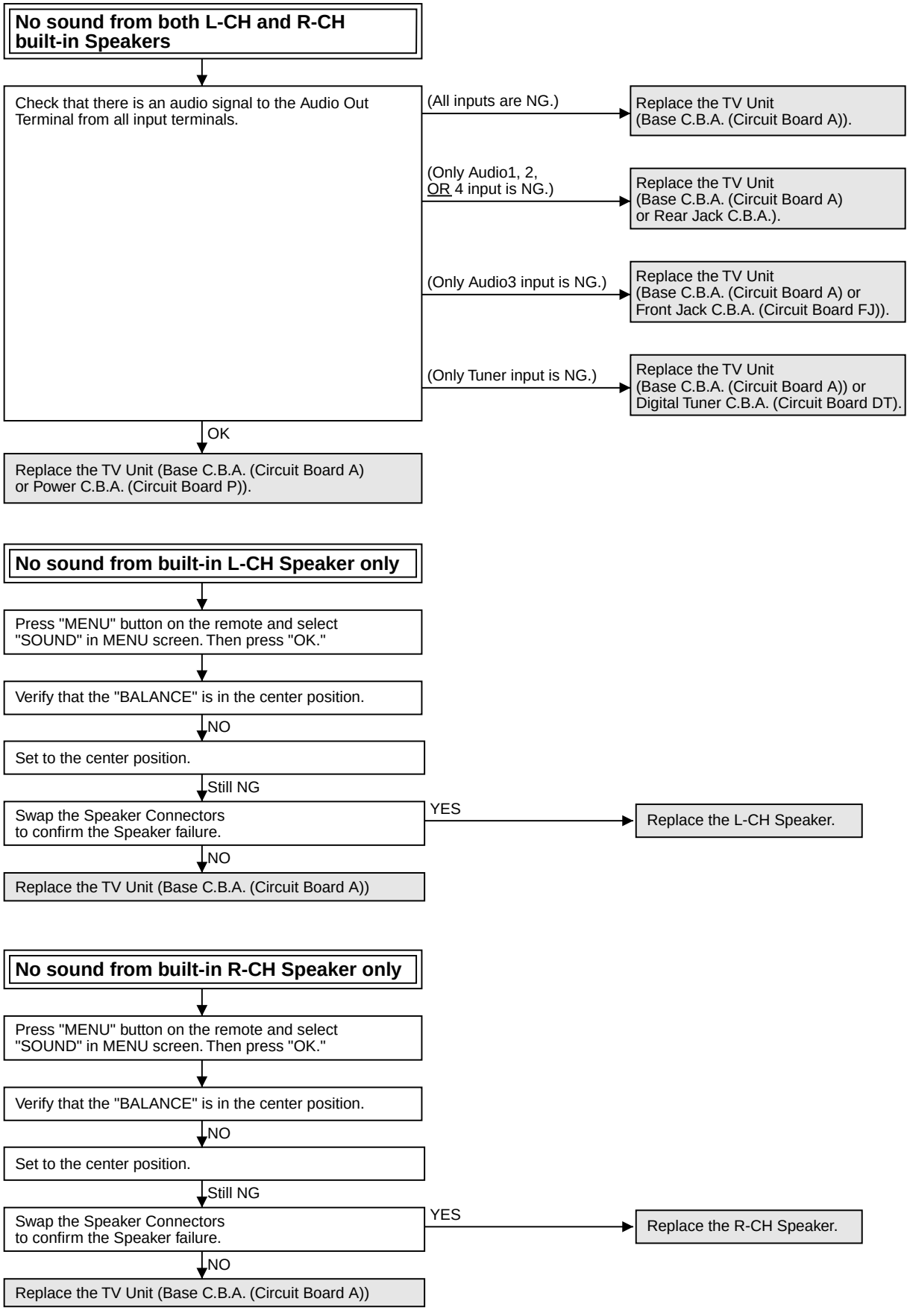
# HOW TO DETERMINE WHICH C.B.A. IS DEFECTIVE

**No picture or abnormal picture**

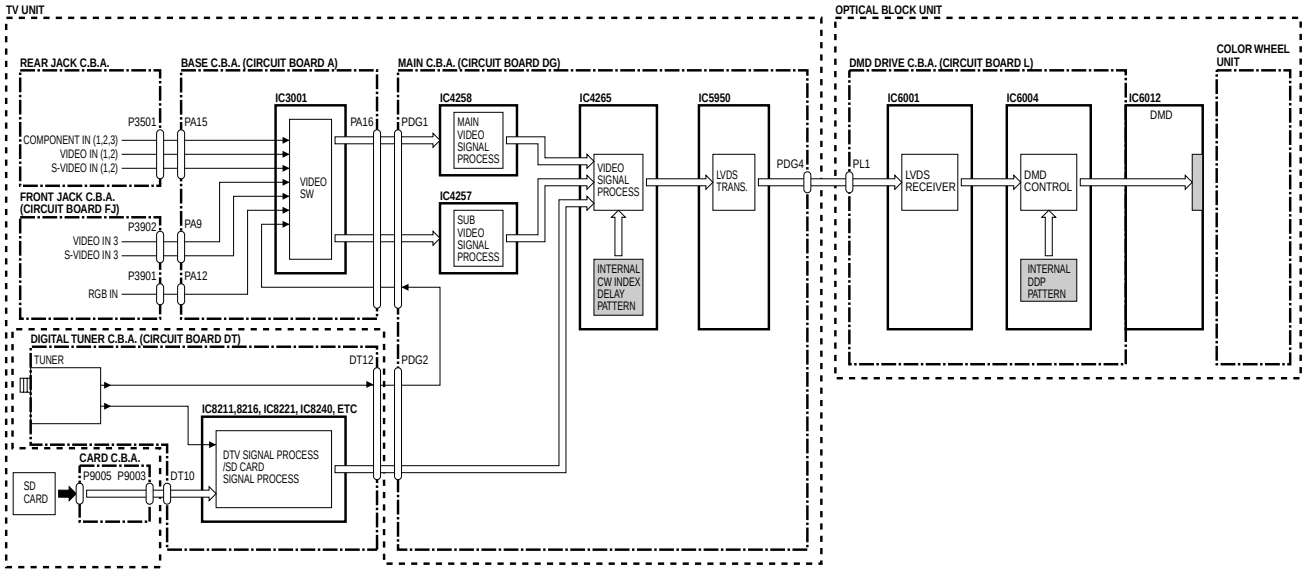
**ABNORMAL PICTURE:**
- **No Picture Color (Black and White picture)**
- **Abnormal Picture Color**
- **Unsynchronized Picture**
- **Dark Picture**

| | |
|---|---|
| (Only Video1,2 OR 4 input is NG.) | Replace the TV Unit (Rear Jack C.B.A. or Base C.B.A. (Circuit Board A)). |
| (Only Video3 input is NG.) | Replace the TV Unit (Front Jack C.B.A. (Circuit Board FJ) or Base C.B.A. (Circuit Board A)). |
| (Only tuner input is NG.) | Replace the TV Unit (Tuner C.B.A. (Circuit Board AT) or Base C.B.A. (Circuit Board A)). |
| (Only PC input is NG.) | Replace the TV Unit (Front Jack C.B.A. (Circuit Board FJ) or Base C.B.A. (Circuit Board A)). |
| (Only Component 2 OR 4 input is NG.) | Replace the TV Unit (Rear Jack C.B.A.). |
| (Component 2 AND 4 input are NG.) | Replace the TV Unit (Main C.B.A. (Circuit Board DG) or Rear Jack C.B.A.). |
| (Analog Tuner, Component AND Video input are NG.) | Replace the TV Unit (Base C.B.A. (Circuit Board A)). |
| (Digital Tuner/SD Card input is NG.) | Replace the Digital Tuner C.B.A. (Circuit Board DT) or TV Unit (Main C.B.A. (Circuit Board DG)). |
| (All inputs are NG.) | Replace the Digital Tuner C.B.A. (Circuit Board DT), or TV Unit (Circuit Board DG) or Optical Block Unit (DMD Drive C.B.A. (Circuit Board L) or Color Wheel Unit. |

In the case that one or some inputs are NG, it can be judged that the Optical Block Unit is OK.


No sound from both L-CH and R-CH built-in Speakers
Check that there is an audio signal to the Audio Out Terminal from all input terminals.
(All inputs are NG.)
Replace the TV Unit (Base C.B.A. (Circuit Board A)).
(Only Audio1, 2, OR 4 input is NG.)
Replace the TV Unit (Base C.B.A. (Circuit Board A) or Rear Jack C.B.A.).
(Only Audio3 input is NG.)
Replace the TV Unit (Base C.B.A. (Circuit Board A) or Front Jack C.B.A. (Circuit Board FJ)).
(Only Tuner input is NG.)
Replace the TV Unit (Base C.B.A. (Circuit Board A)) or Digital Tuner C.B.A. (Circuit Board DT).
OK
Replace the TV Unit (Base C.B.A. (Circuit Board A) or Power C.B.A. (Circuit Board P)).
No sound from built-in L-CH Speaker only
Press "MENU" button on the remote and select "SOUND" in MENU screen. Then press "OK."
Verify that the "BALANCE" is in the center position.
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the L-CH Speaker.
NO
Replace the TV Unit (Base C.B.A. (Circuit Board A))
No sound from built-in R-CH Speaker only
Press "MENU" button on the remote and select "SOUND" in MENU screen. Then press "OK."
Verify that the "BALANCE" is in the center position.
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the R-CH Speaker.
NO
Replace the TV Unit (Base C.B.A. (Circuit Board A))

# TIPS FOR DETERMINING WHICH C.B.A. IS DEFECTIVE




| | |
|---|---|
| Display the internal pattern for "DDP" in Factory Adjust Mode. Refer to "HOW TO DISPLAY THE INTERNAL PATTERN" as shown in Figure A. | If the internal pattern is OK, it can be judged that the circuit on the back end of IC6004 (The Optical Block Unit is OK) is OK. |
| Display the internal pattern for "CW INDEX DELAY" in Factory Adjust Mode. Refer to "HOW TO DISPLAY THE INTERNAL PATTERN" as shown in Figure A. | If the internal pattern is OK, it can be judged that the circuit on the back end of IC4265 is normal. |

## HOW TO DISPLAY THE INTERNAL PATTERN

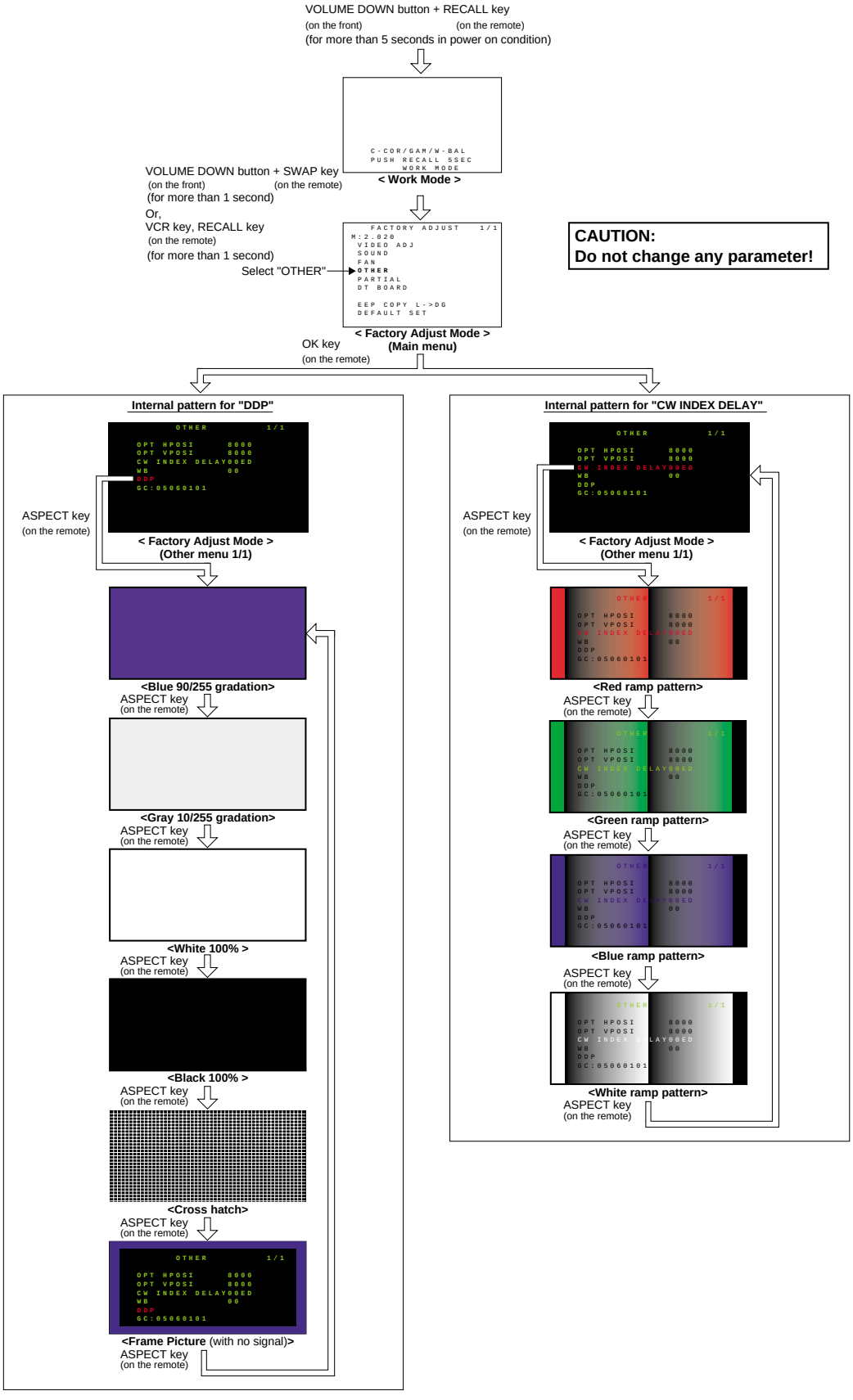
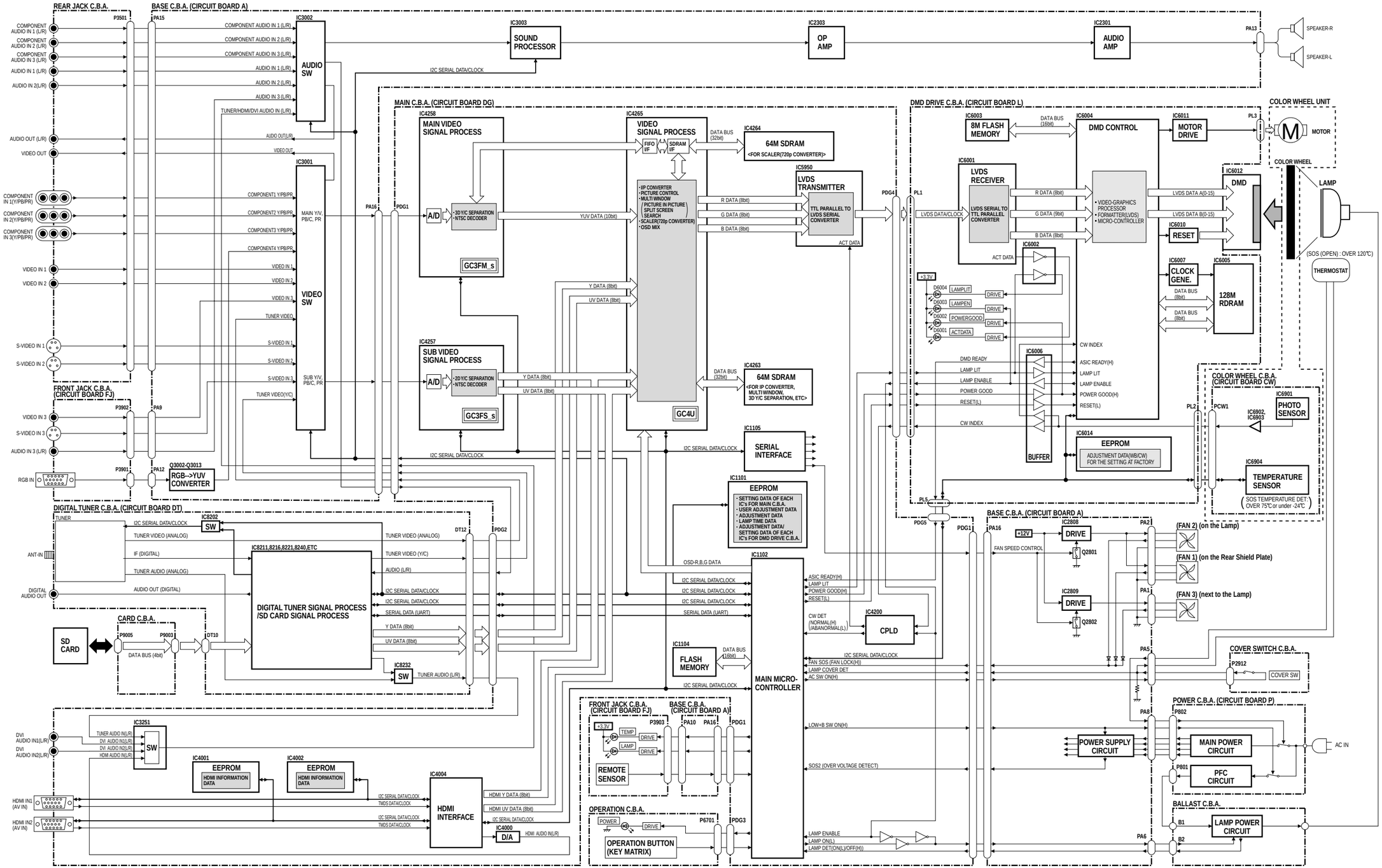



Figure A.

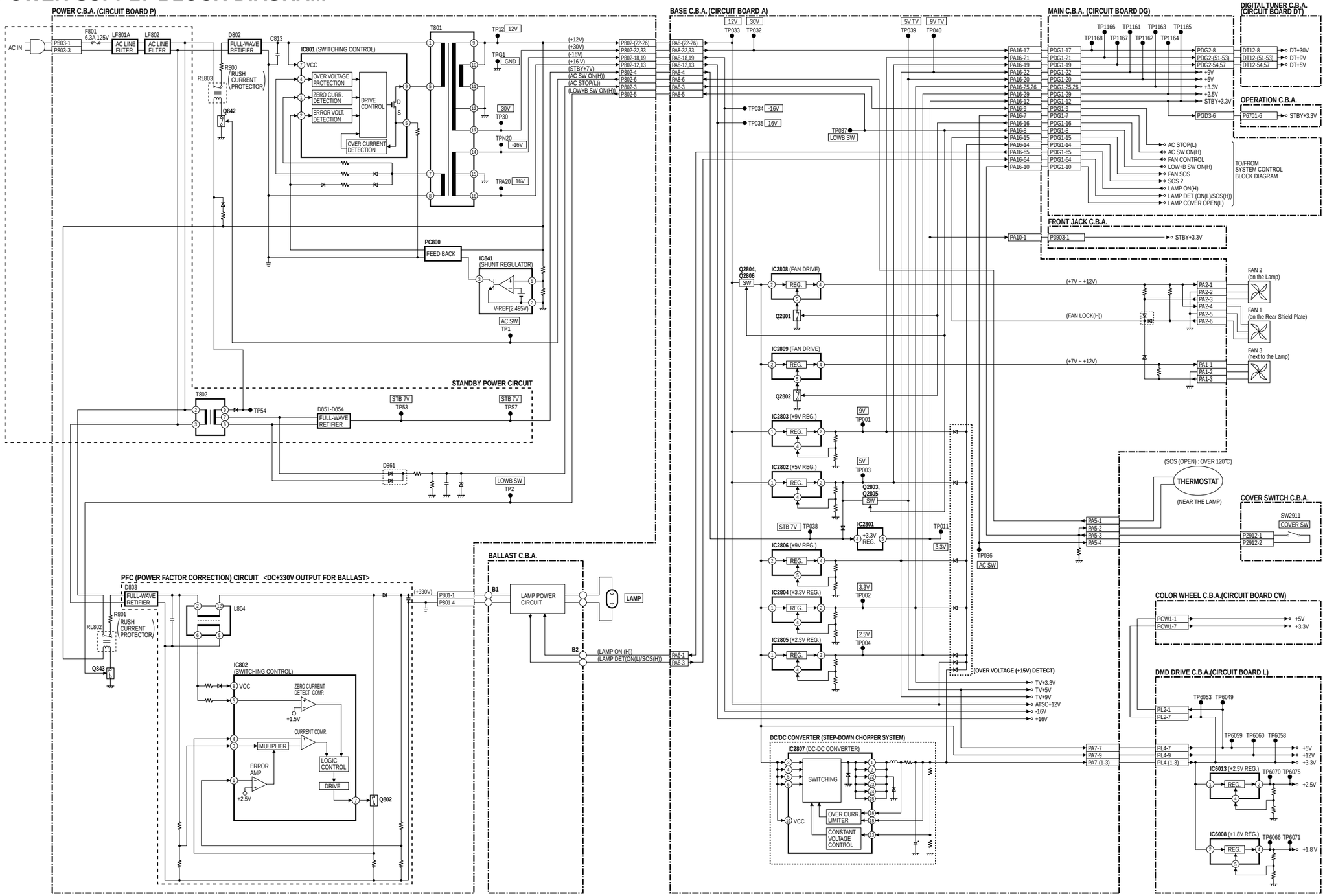
# 9 BLOCK DIAGRAMS

## OVERALL BLOCK DIAGRAM



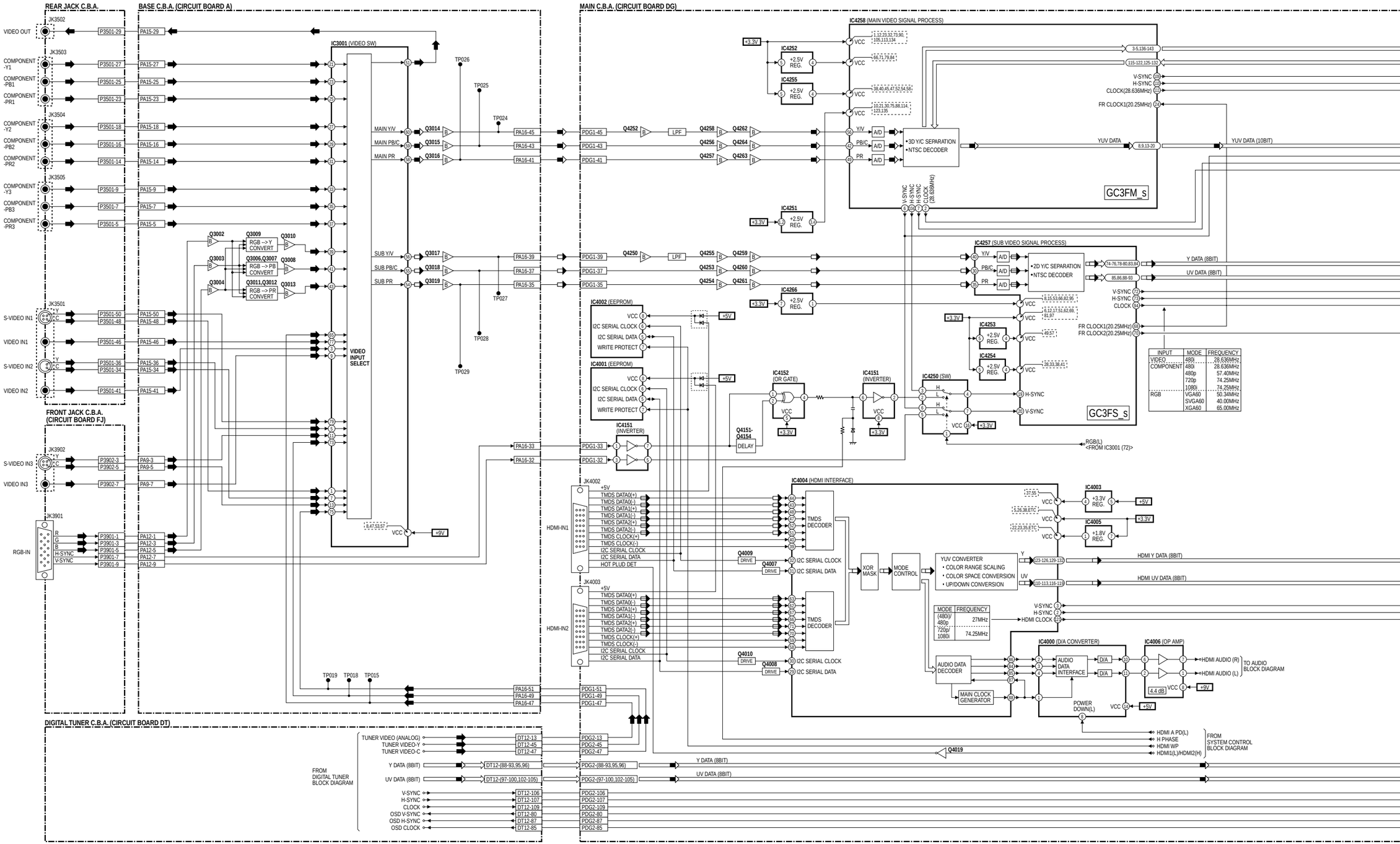

**OVERALL BLOCK DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# POWER SUPPLY BLOCK DIAGRAM



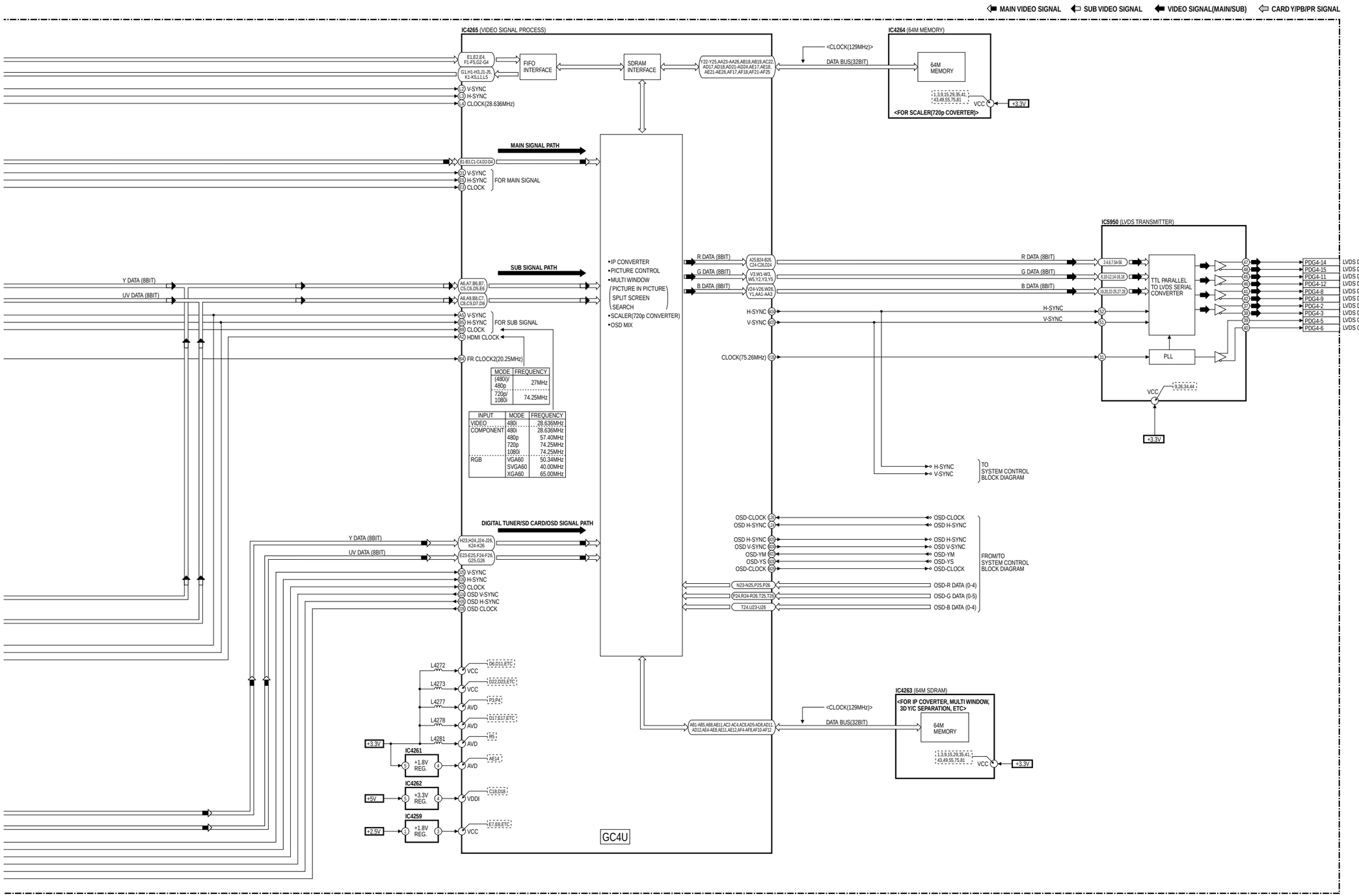

**POWER SUPPLY BLOCK DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# VIDEO SIGNAL PATH I BLOCK DIAGRAM (1/2)




**VIDEO SIGNAL PATH I BLOCK DIAGRAM (1/2)**
**PT-56DLX75/PT-61DLX75**

# VIDEO SIGNAL PATH I BLOCK DIAGRAM (2/2)

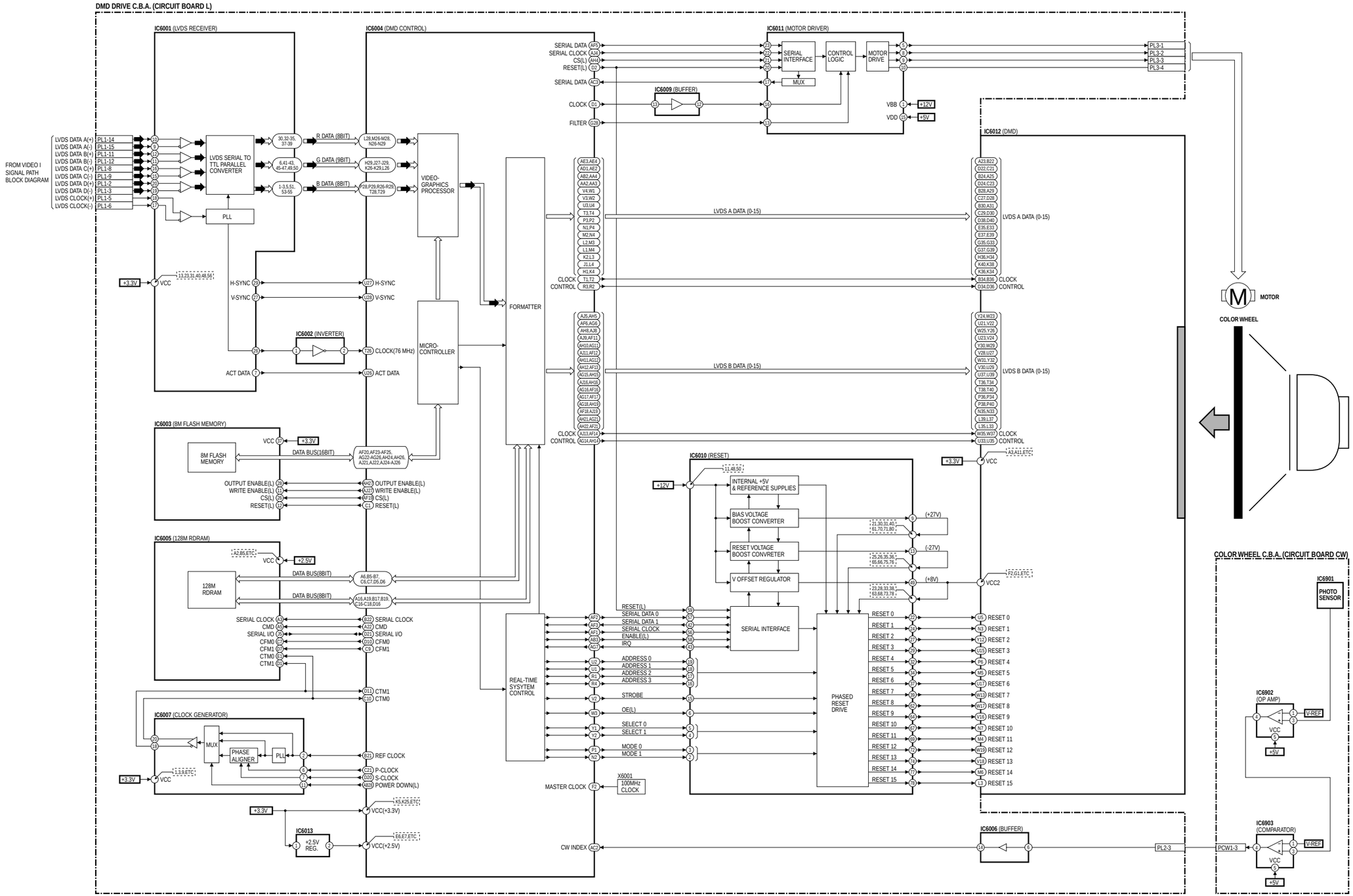



| MODE | FREQUENCY |
|---|---|
| (480i)/ 480p | 27MHz |
| 720p/ 1080i | 74.25MHz |

| INPUT | MODE | FREQUENCY |
|---|---|---|
| VIDEO | 480i | 28.636MHz |
| COMPONENT | 480i | 28.636MHz |
| | 480p | 57.40MHz |
| | 720p | 74.25MHz |
| | 1080i | 74.25MHz |
| RGB | VGA60 | 50.34MHz |
| | SVGA60 | 40.00MHz |
| | XGA60 | 65.00MHz |

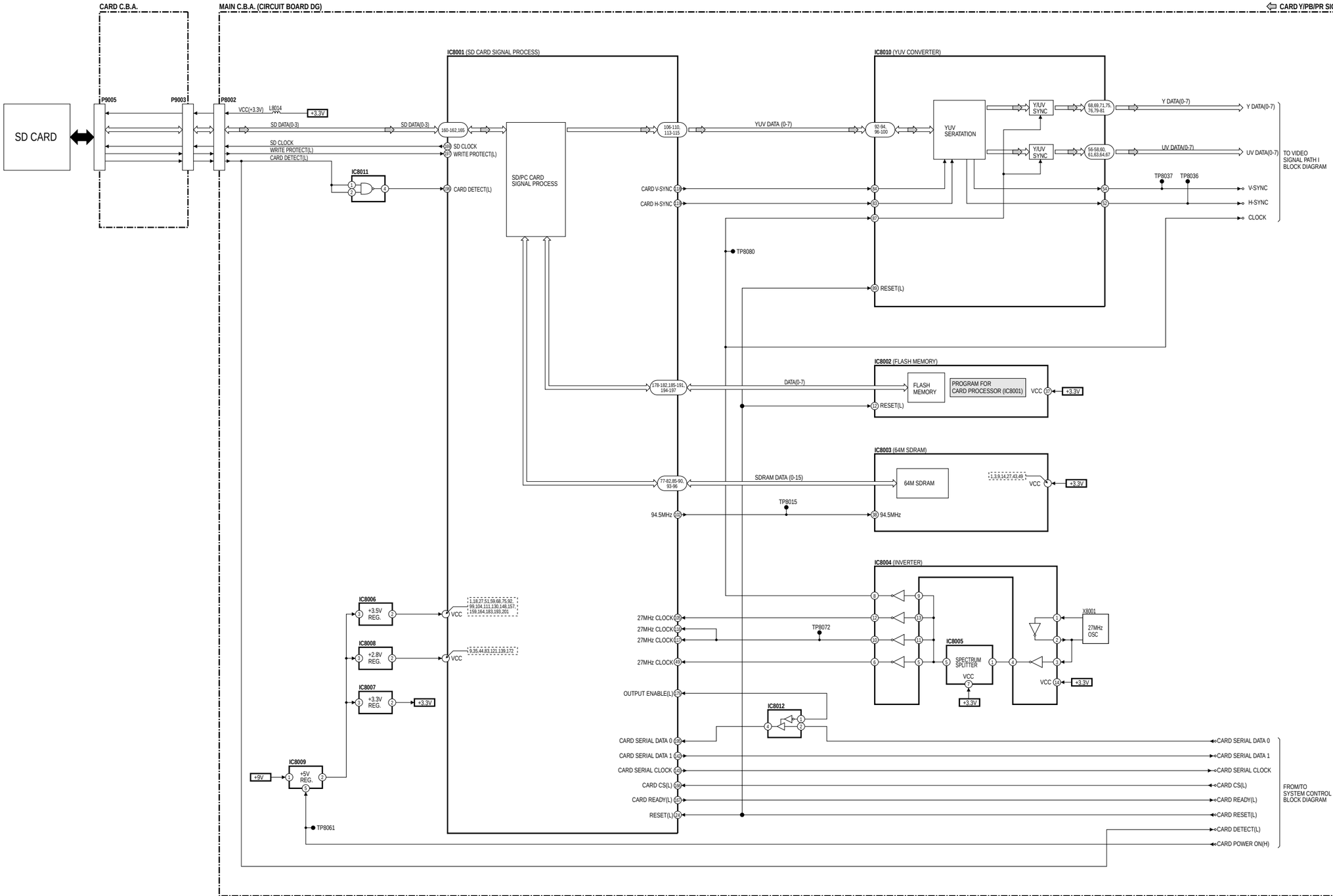
**VIDEO SIGNAL PATH I BLOCK DIAGRAM (2/2)**
**PT-56DLX75/PT-61DLX75**

# VIDEO SIGNAL PATH II BLOCK DIAGRAM



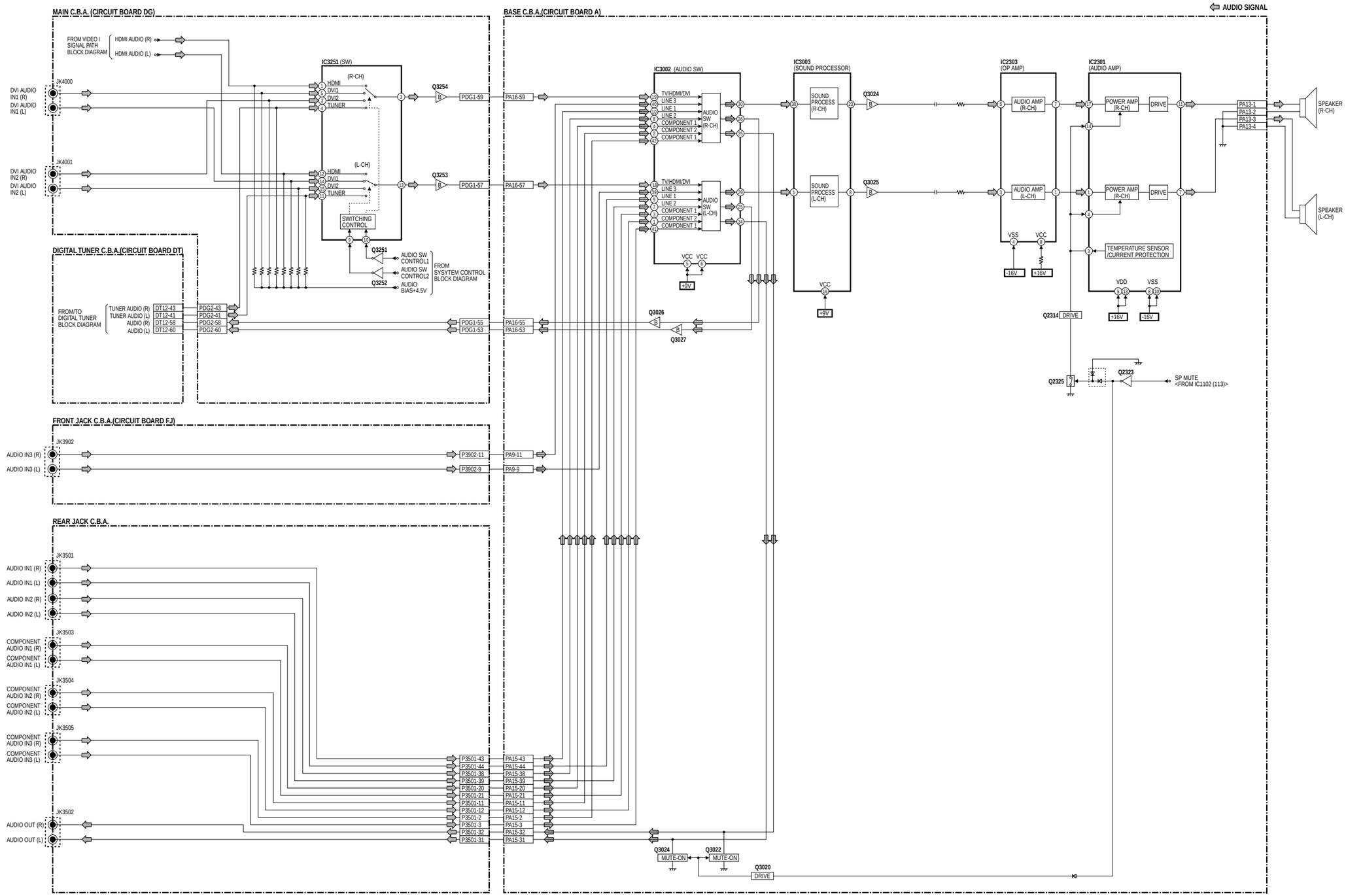

**VIDEO SIGNAL PATH II BLOCK DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# SD CARD SIGNAL PROCESS BLOCK DIAGRAM



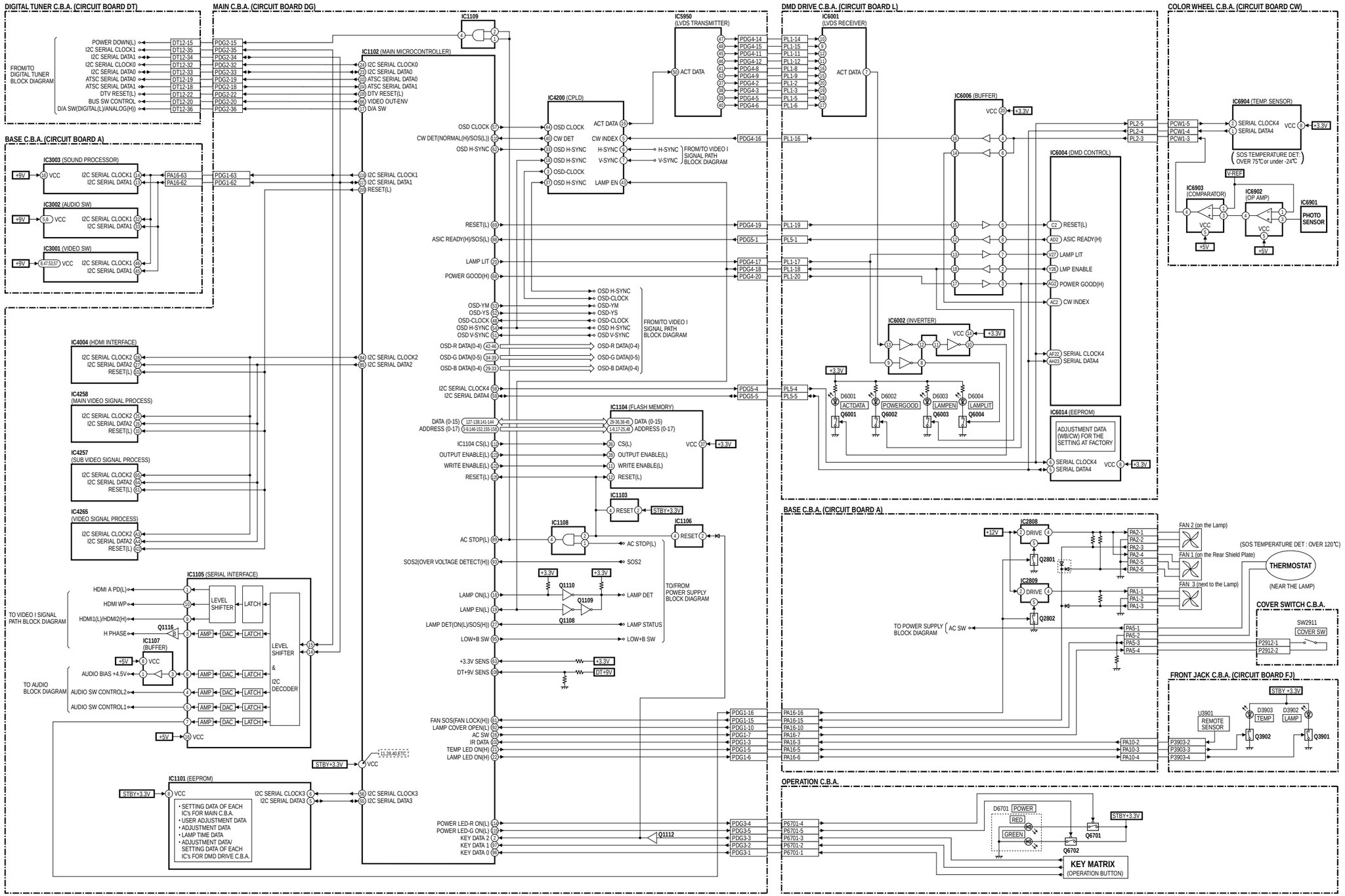

**SD CARD SIGNAL PROCESS BLOCK DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# AUDIO SIGNAL PATH BLOCK DIAGRAM



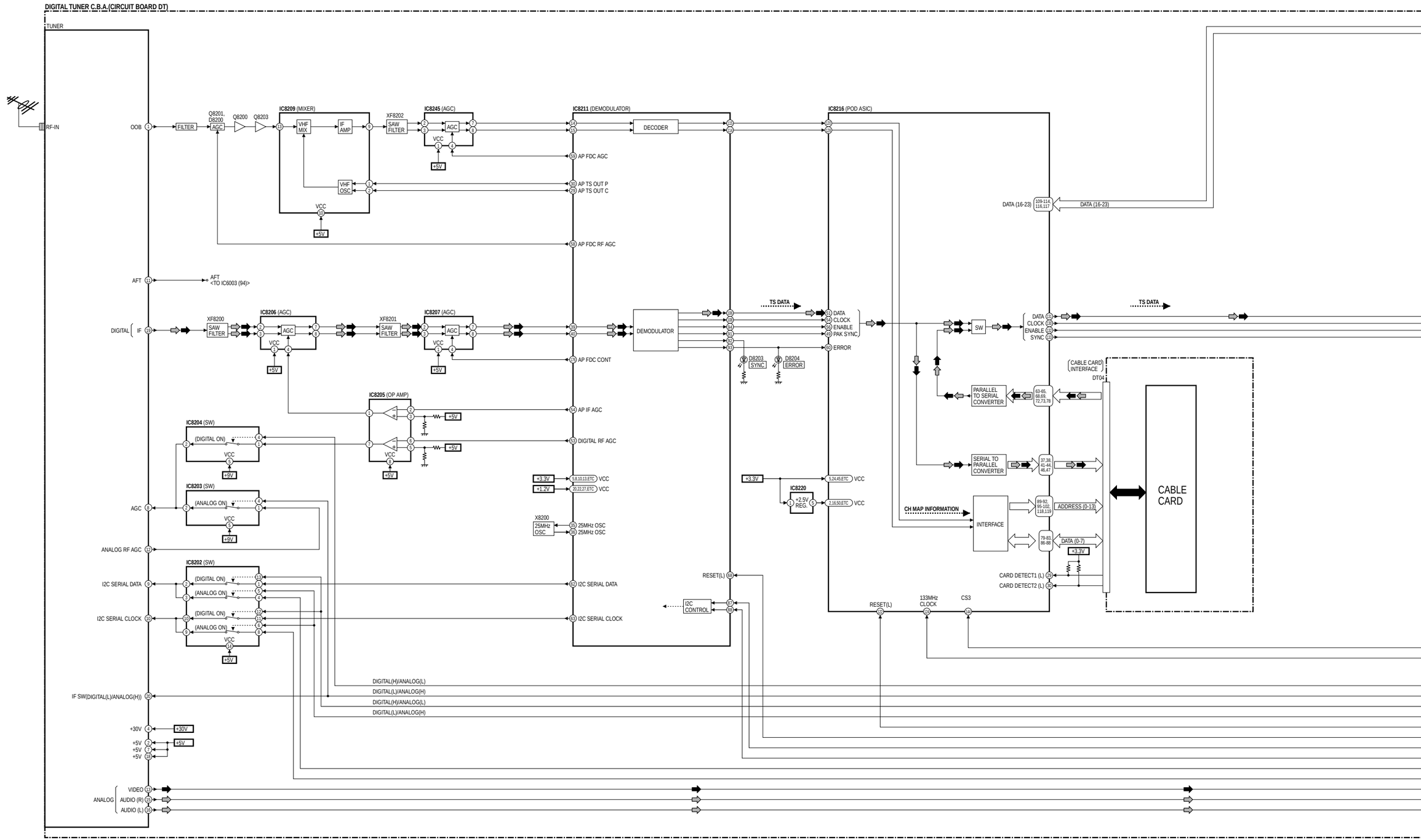

**AUDIO SIGNAL PATH BLOCK DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# SYSTEM CONTROL BLOCK DIAGRAM



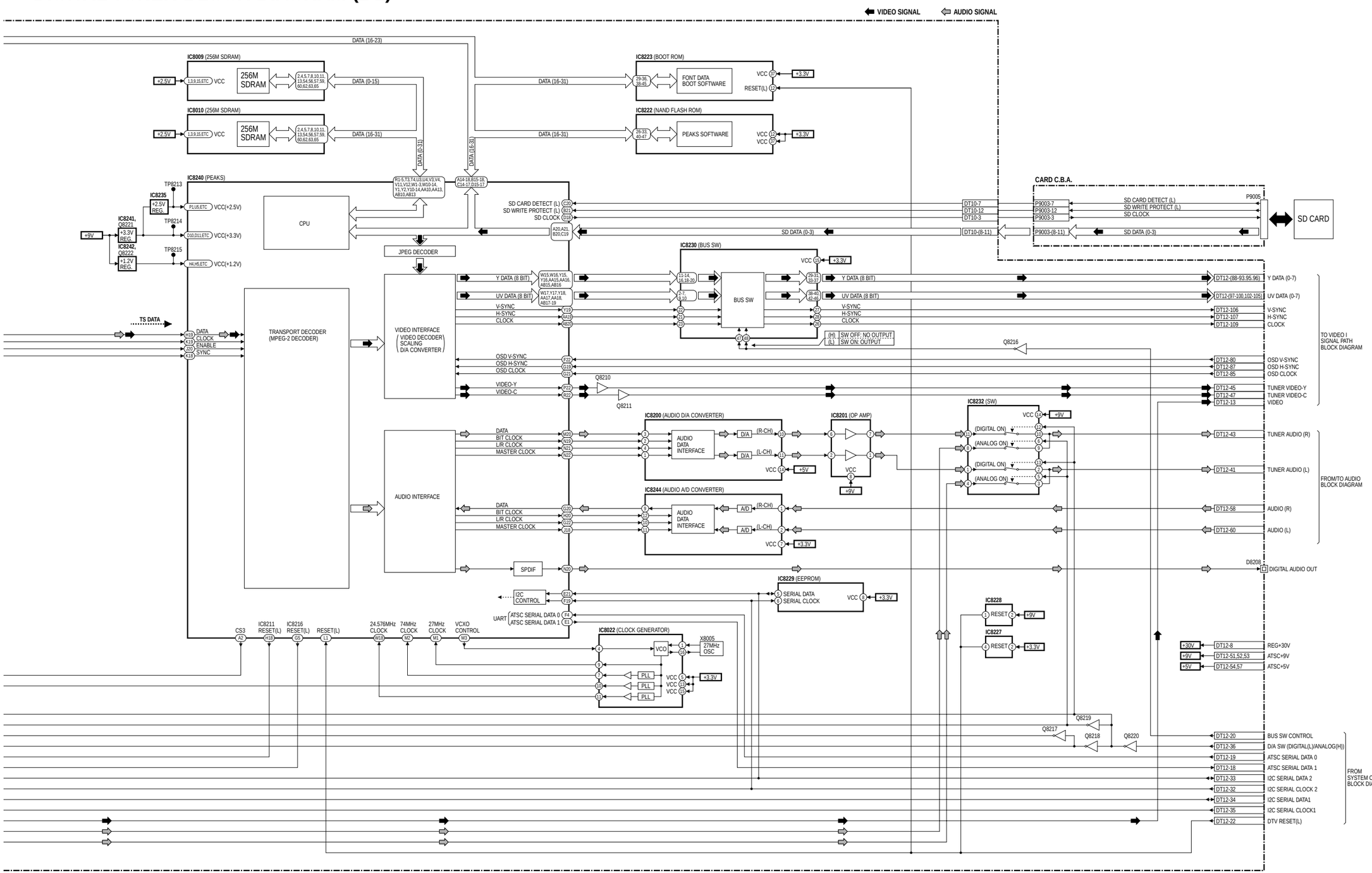

**SYSTEM CONTROL BLOCK DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# DIGITAL TUNER BLOCK DIAGRAM (1/2)



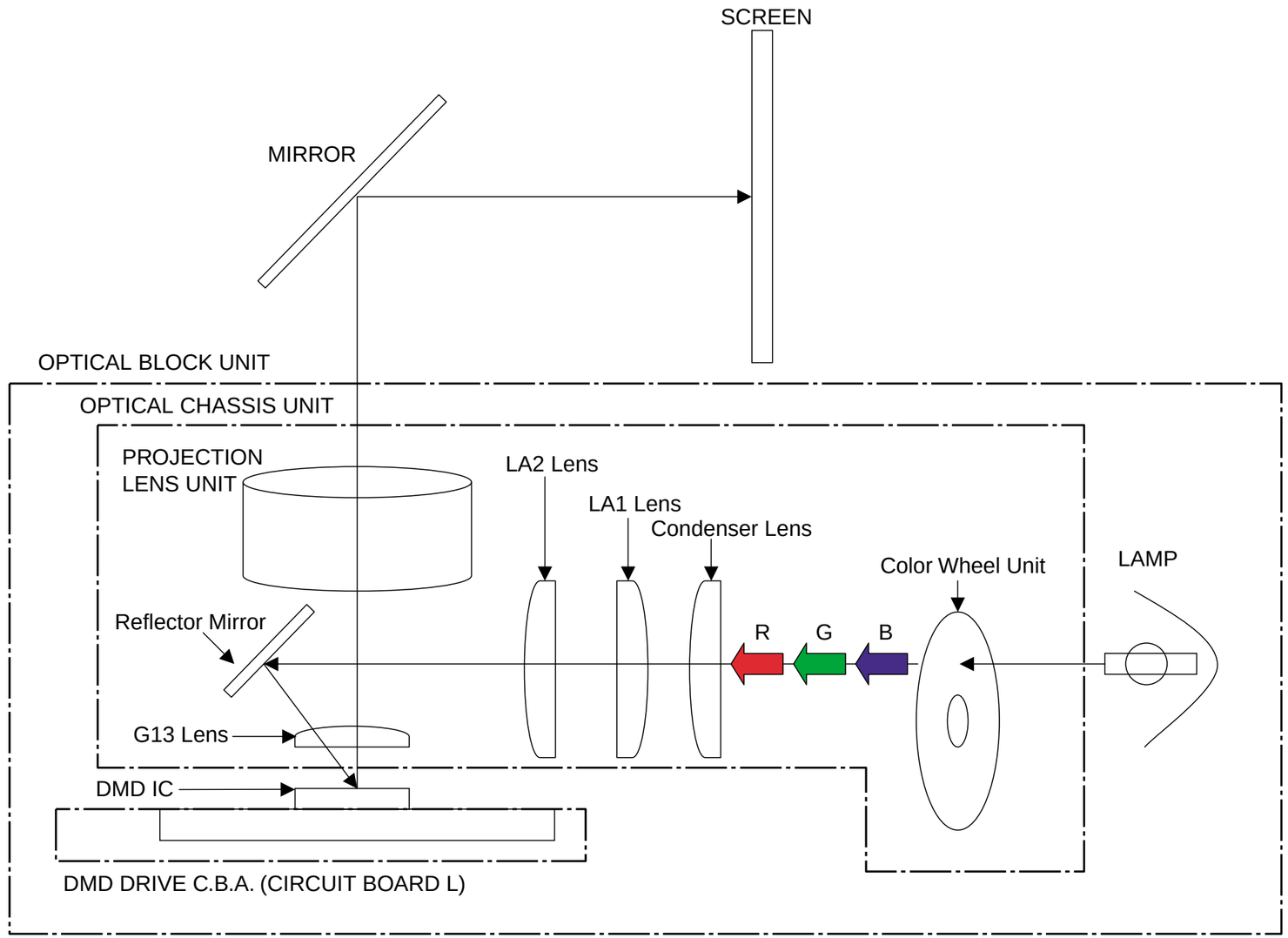

**DIGITAL TUNER BLOCK DIAGRAM (1/2)**
**PT-56DLX75/PT-61DLX75**

# DIGITAL TUNER BLOCK DIAGRAM (2/2)




**DIGITAL TUNER BLOCK DIAGRAM (2/2)**
**PT-56DLX75/PT-61DLX75**

# OPTICAL BLOCK DIAGRAM



# 10 SCHEMATIC DIAGRAMS

## 10.1. SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES

1. **Important safety notice**
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.

2. Do not use the part numbers shown on these drawings for ordering.
   The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

3. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Parts different in shape or size may be used.
   However, only interchangeable parts will be supplied as service replacement parts.

5. Test point information
   ● : Test point with a jumper wire across a hole in P.C.B.
   ○ : Test point with no test pin.

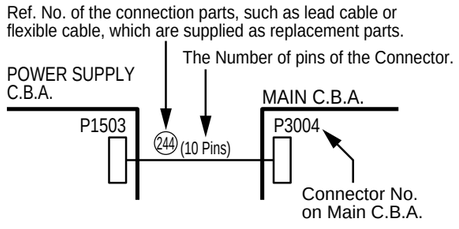
### Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes
   The Zener Voltages of Zener Diodes are indicated as such on Schematic Diagrams.

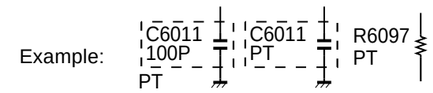
   Example:
   (6.2V).....Zener Voltage

2. How to identify Connectors
   Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to (its counterpart).
   Use the interconnection schematic diagram to find the connection between associated connectors.

   Example:
   The connections between two C.B.A.s are shown below.




3. Parts marked "PT" are not used in any models included in this service model.




4. Jumper wires are used for WA10, WA5 etc and these are not supplied as replacement parts.

### Circuit Board Layout Note

Circuit Board Layouts show components installed for various models.
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:
Circuit Board Layouts include components which are not used.

## 10.2. INTERCONNECTION SCHEMATIC DIAGRAM

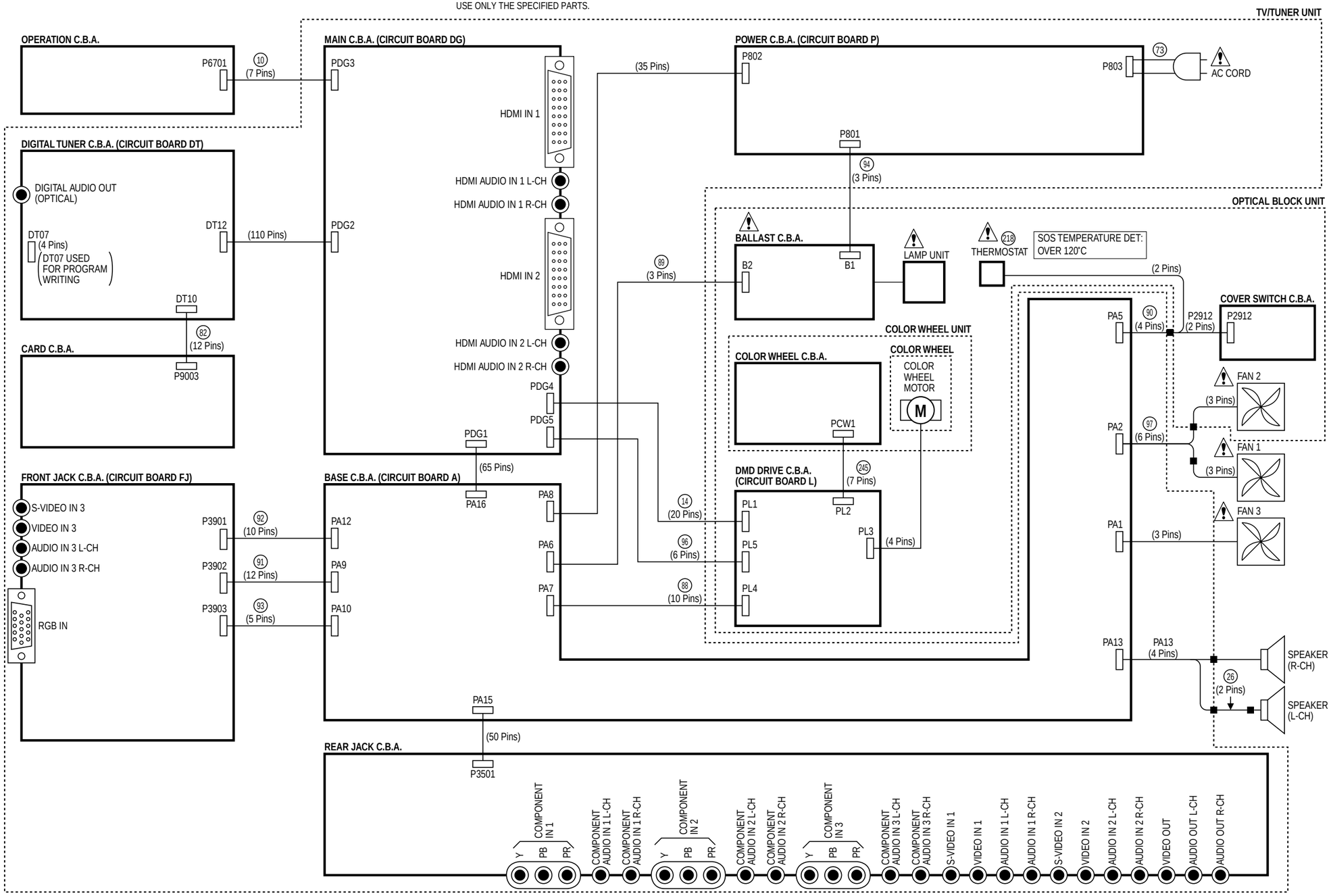
# INTERCONNECTION SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.




**INTERCONNECTION SCHEMATIC DIAGRAM**
**PT-56DLX75/PT-61DLX75**

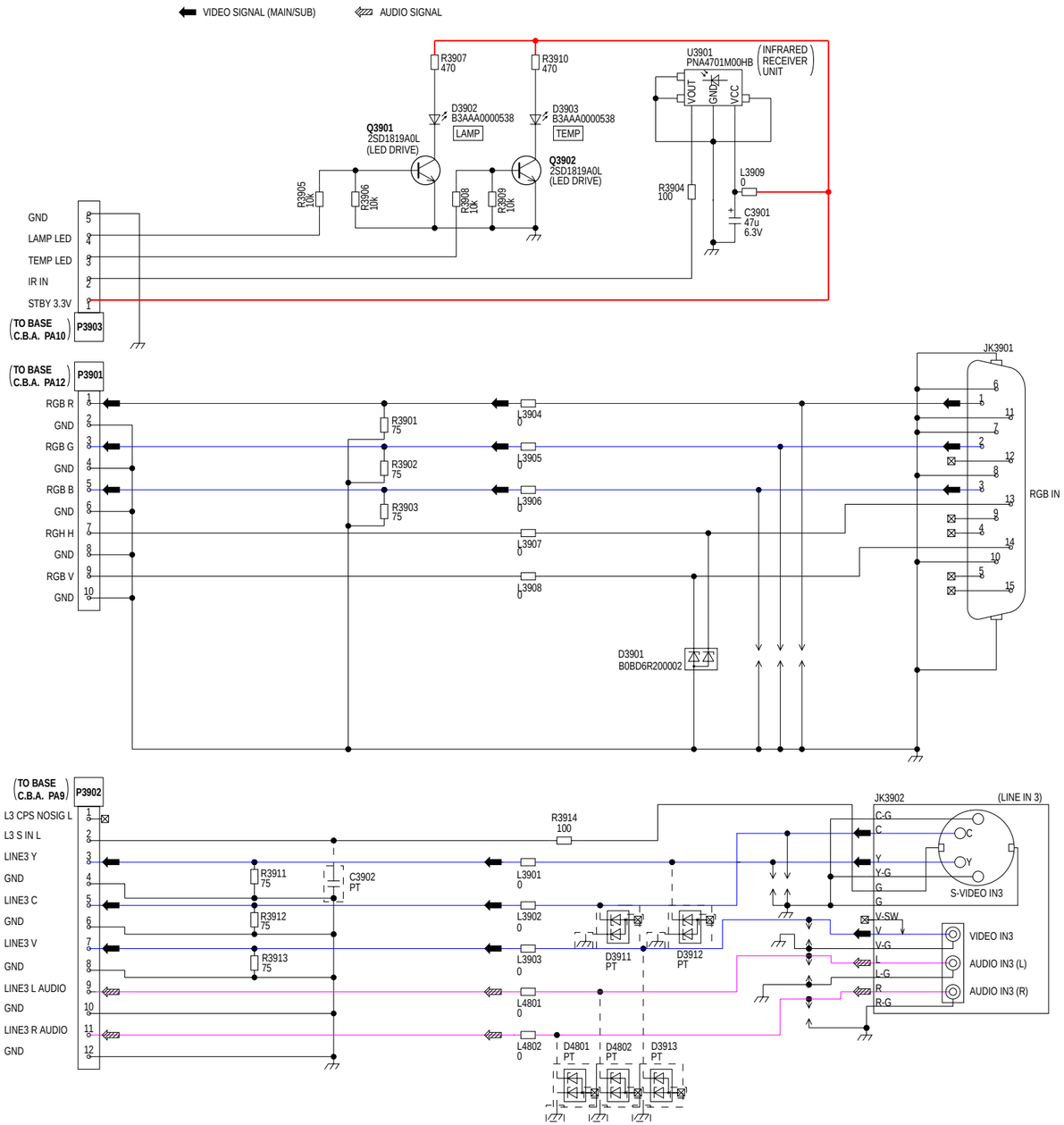
# 10.3. FRONT JACK (CIRCUIT BOARD FJ) SCHEMATIC DIAGRAM

## FRONT JACK (CIRCUIT BOARD FJ) SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: PARTS MARKED "PT" ARE NOT USED.




**LINK TO VOLTAGE CHART**

**LSJB3187**
**FRONT JACK (CIRCUIT BOARD FJ) SCHEMATIC DIAGRAM**
**PT-56DLX75/PT-61DLX75**

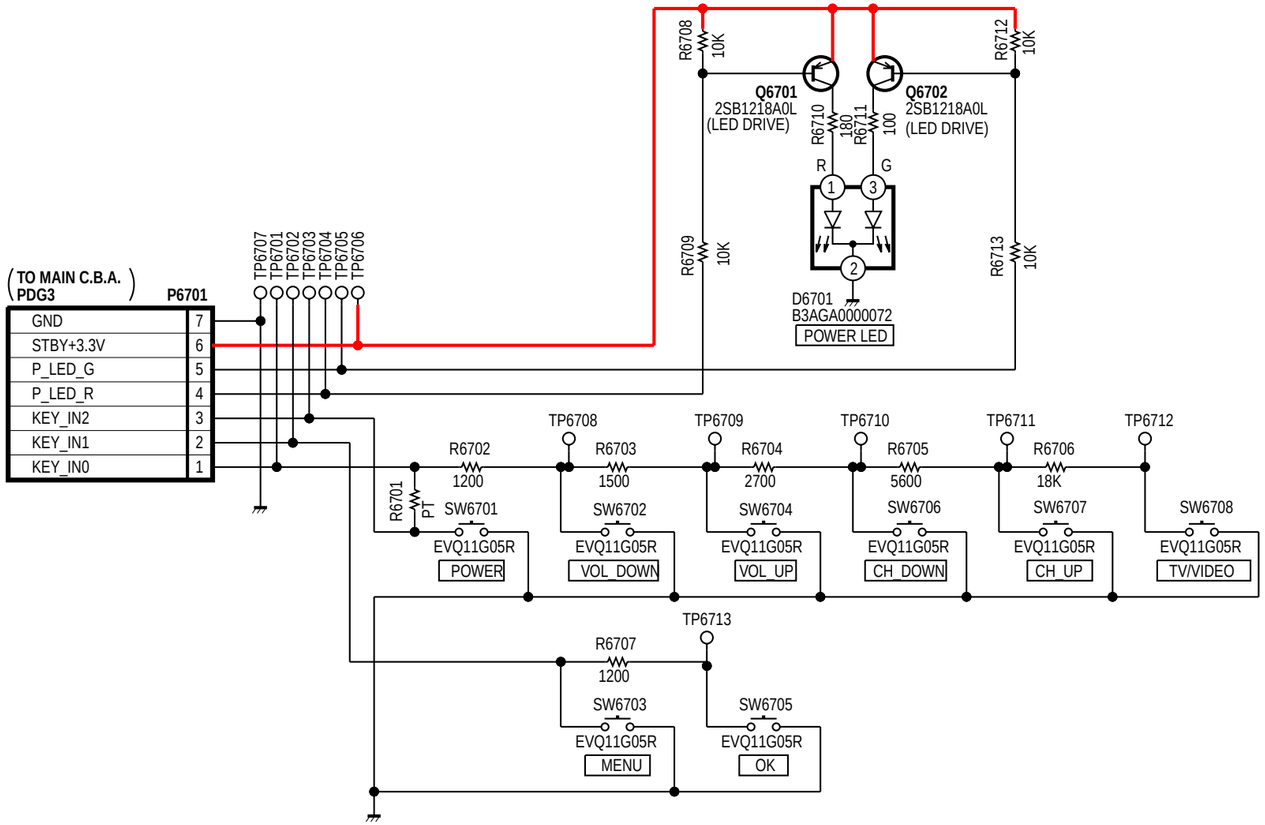
# 10.4. OPERATION SCHEMATIC DIAGRAMS

## OPERATION SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: PARTS MARKED "PT" ARE NOT USED.




**LINK TO VOLTAGE CHART**
**LSJB3156**
**OPERATION SCHEMATIC DIAGRAM**
**PT-56DLX75/PT-61DLX75**

# 10.5. VOLTAGE CHART

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

OPERATIONC.B.A.

| PIN NO. | VOLTAGE |
|---|---|
| Q6701 | |
| E | 3.3 |
| C | 0 |
| B | 3.3 |
| Q6702 | |
| E | 3.3 |
| C | 3.2 |
| B | 2.6 |
| | |
| TP6701 | 3.3 |
| TP6702 | 3.3 |
| TP6703 | 0 |
| TP6704 | 3.3 |
| TP6705 | 0.3 |
| TP6706 | 3.3 |
| TP6707 | 0 |
| TP6708 | 3.3 |
| TP6709 | 3.3 |
| TP6710 | 3.3 |
| TP6711 | 3.3 |
| TP6712 | 3.3 |
| TP6713 | 3.3 |
| TP6714 | 0 |
| TP6715 | 0 |
| TP6716 | 0 |

FRONT JACK
(CIRCUIT BOARD FJ) C.B.A.

| PIN NO. | VOLTAGE |
|---|---|
| Q3901 | |
| E | 0 |
| C | 2.3 |
| B | 0 |
| Q3902 | |
| E | 0 |
| C | 2.3 |
| B | 0 |

# 11 CIRCUIT BOARD LAYOUT

## 11.1. FRONT JACK (CIRCUIT BOARD FJ) C.B.A.

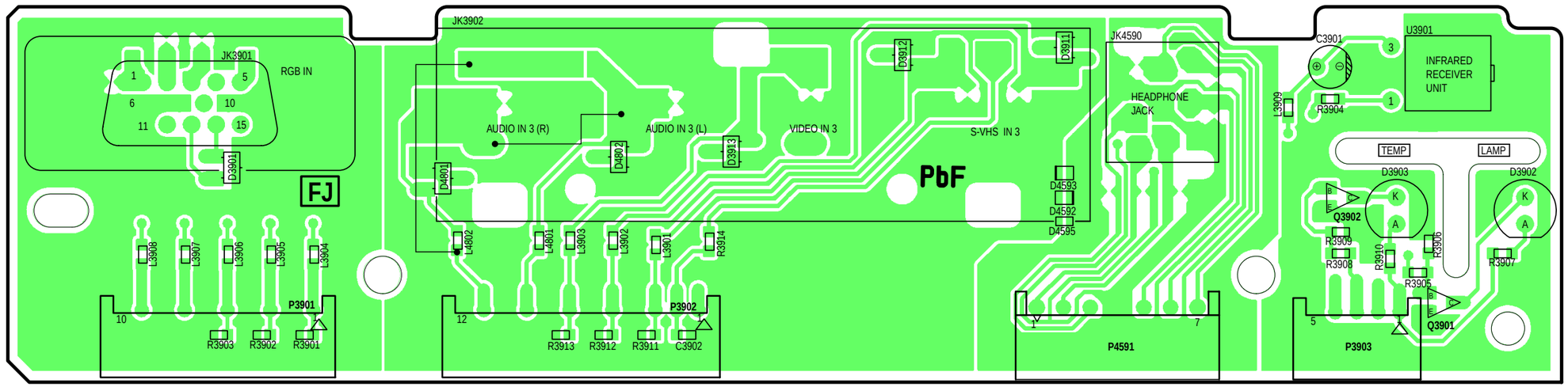
### FRONT JACK C.B.A. (CIRCUIT BOARD FJ) REPLACEMENT NOTE:

The Front Jack C.B.A. has been changed from suffix (version) number ① to suffix (version) number ② on a running change basis.
Suffix (version) number ② is different from suffix (version) number ① in a few traces, and parts are the same.

### FRONT JACK C.B.A. (CIRCUIT BOARD FJ) LSEP3187A (SUFFIX (VERSION) NUMBER①)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

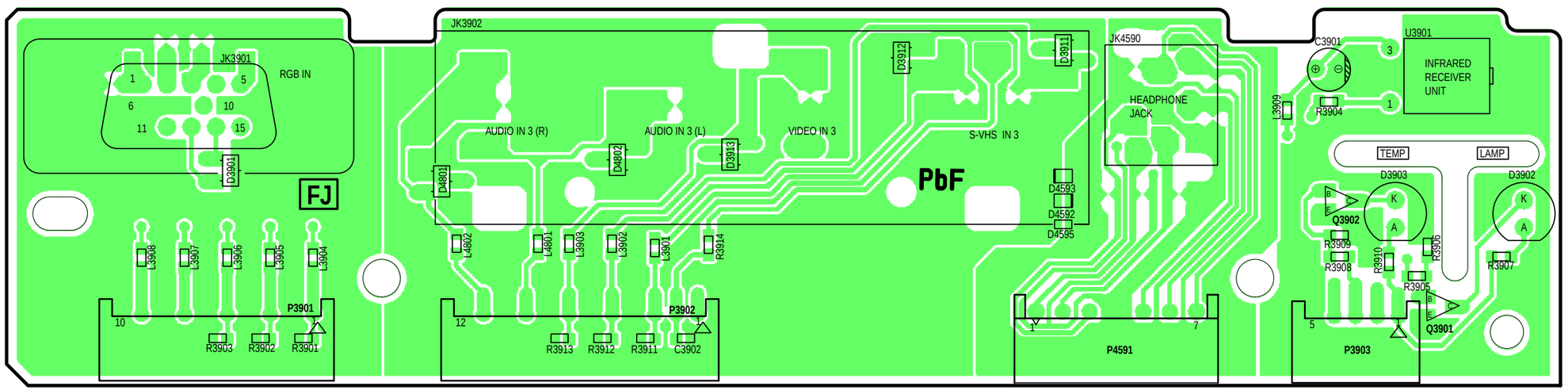
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.




LSJB3187

### FRONT JACK C.B.A. (CIRCUIT BOARD FJ) LSEP3187A (SUFFIX (VERSION) NUMBER②)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.



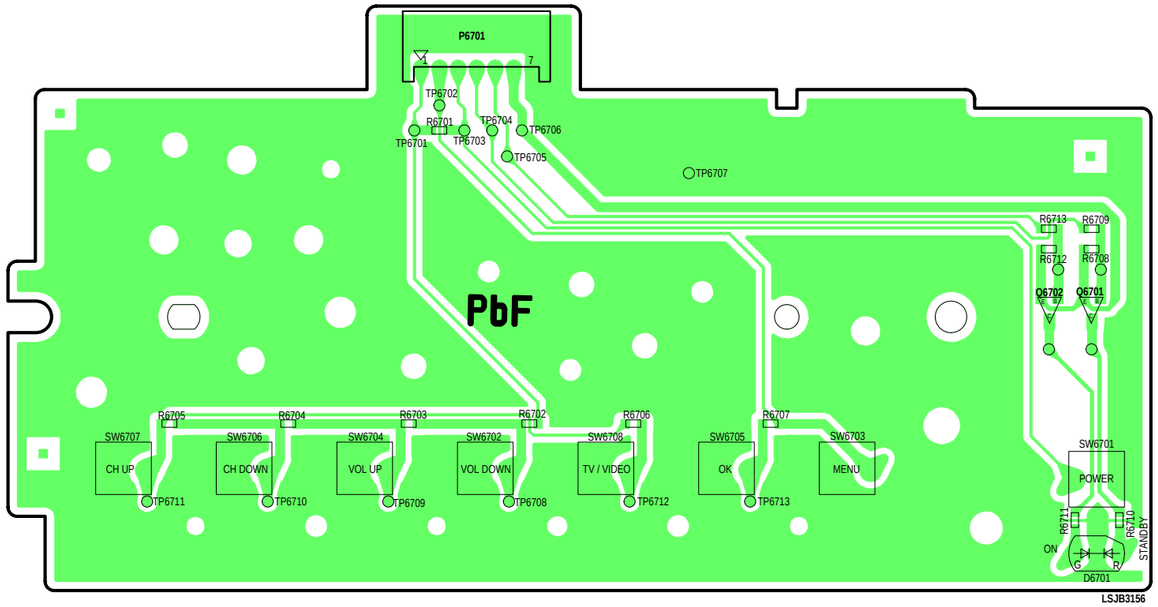

LSJB3187

FRONT JACK C.B.A. (CIRCUIT BOARD FJ) LSEP3187A
PT-56DLX75/PT-61DLX75

# 11.2. OPERATION C.B.A.

## OPERATION C.B.A. LSEP3156A

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.



# 12 EXPLODED VIEWS

## 12.1. MAIN PARTS SECTION

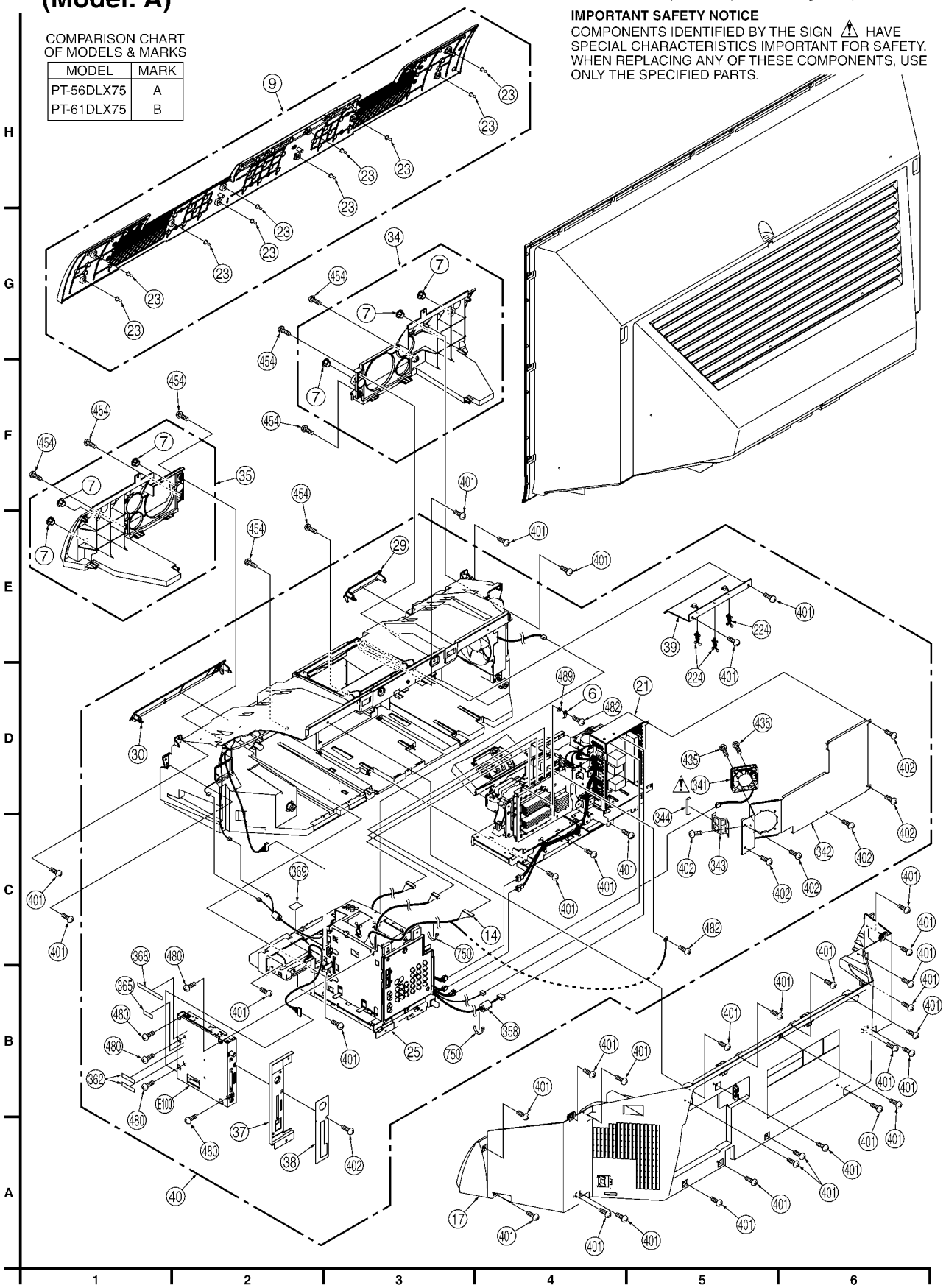
### ❶ 56 INCH MAIN PARTS SECTION (Model: A)

**Note:** Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.

**IMPORTANT SAFETY NOTICE**
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |

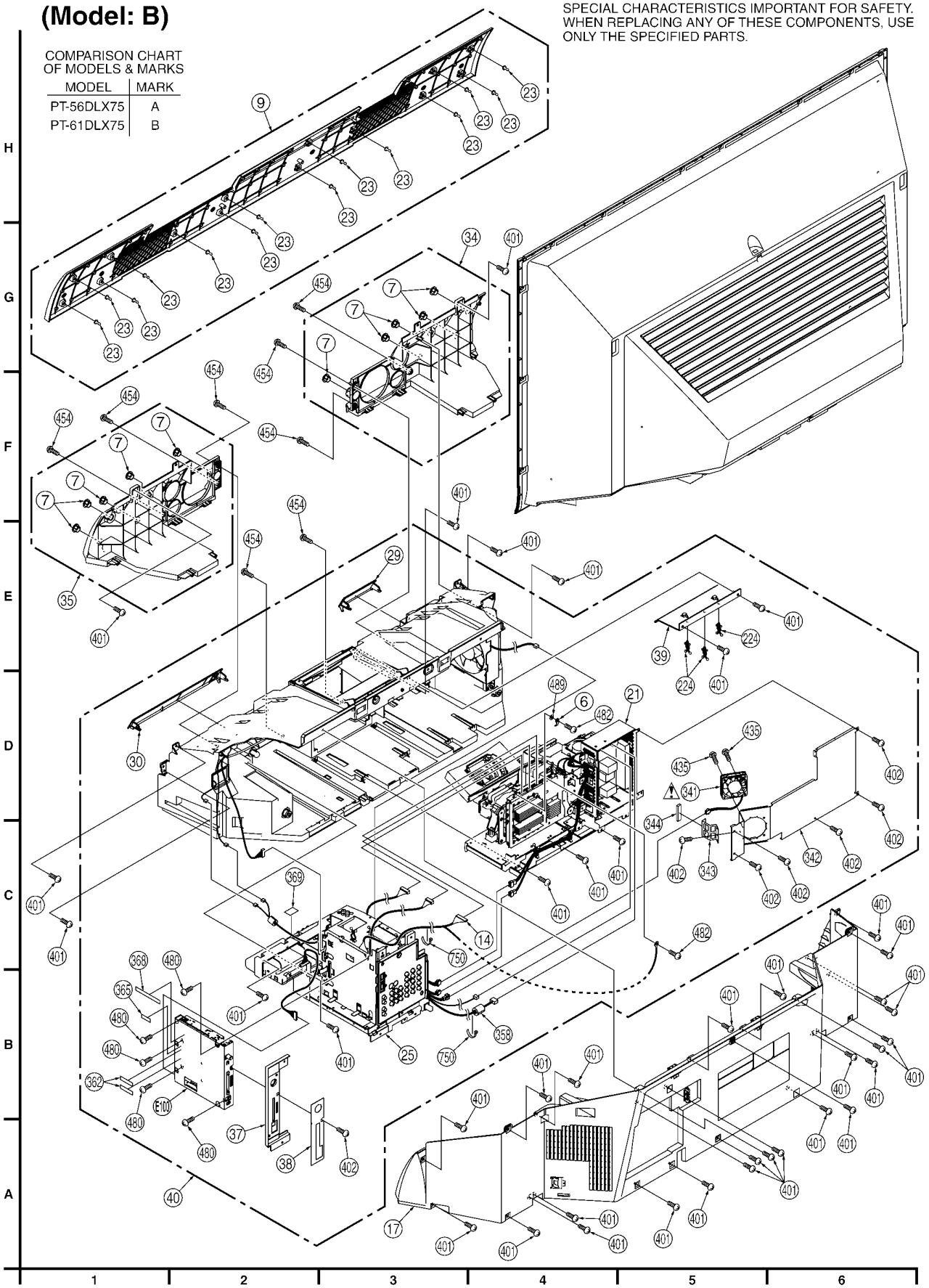


# ❶ 61 INCH MAIN PARTS SECTION (Model: B)

**IMPORTANT SAFETY NOTICE**
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

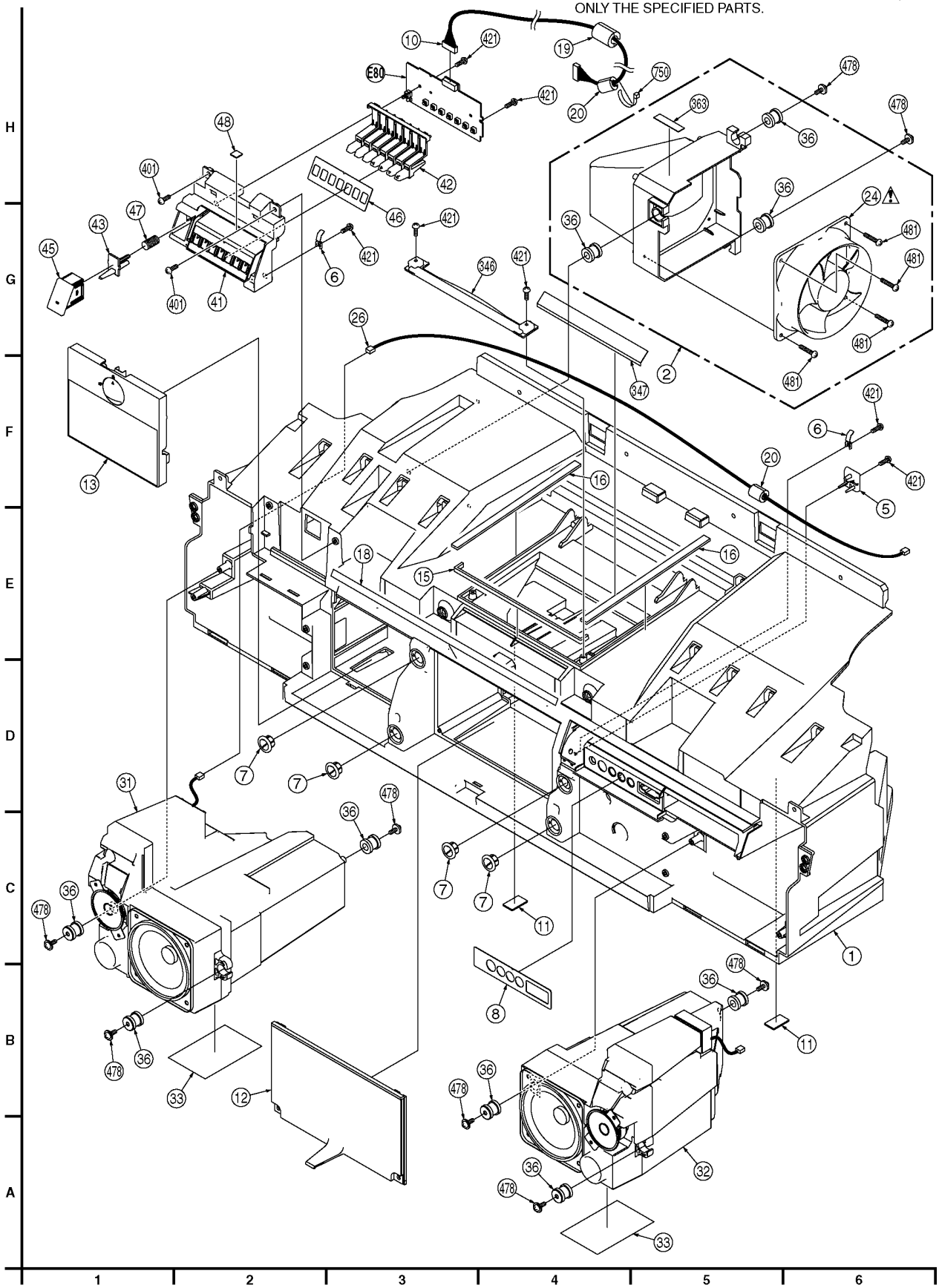
| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |



# 12.2. FRONT AND BASE SECTION

## ❷ FRONT AND BASE SECTION

**IMPORTANT SAFETY NOTICE**
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

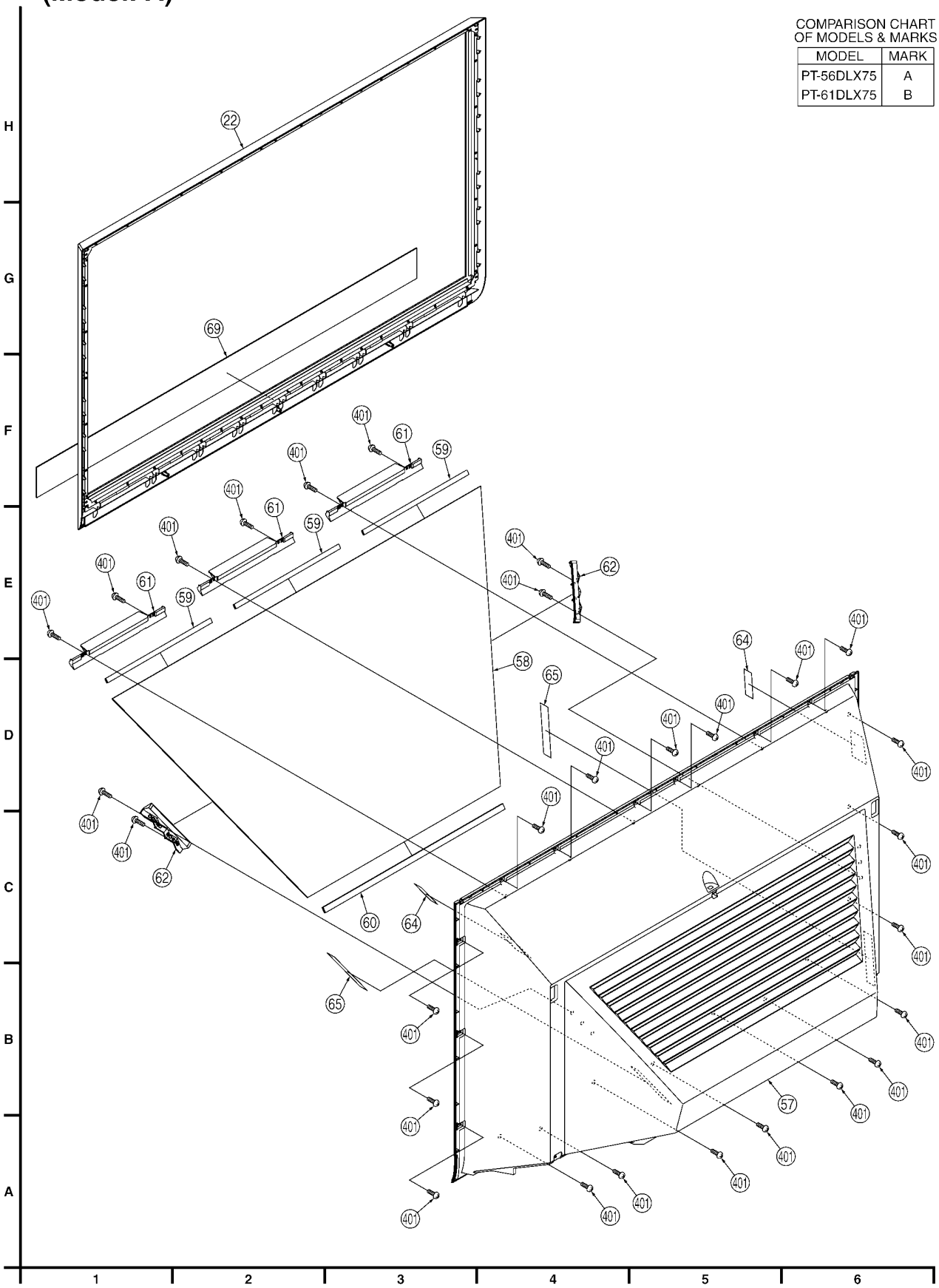


# 12.3. DISPLAY SECTION

## ❸ 56 INCH DISPLAY SECTION (Model: A)

COMPARISON CHART OF MODELS & MARKS

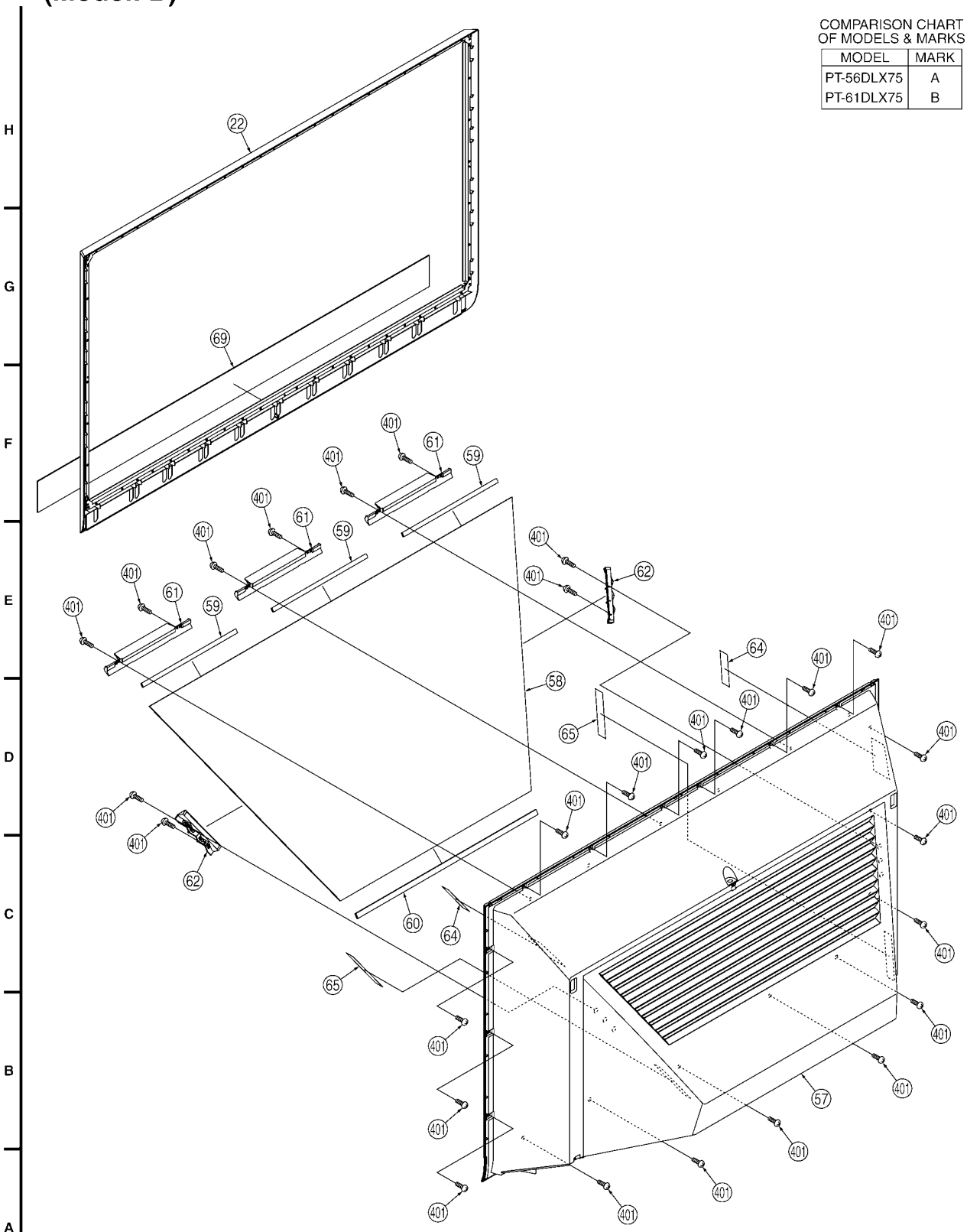
| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |



# ❸ 61 INCH DISPLAY SECTION
## (Model: B)

COMPARISON CHART
OF MODELS & MARKS

| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |

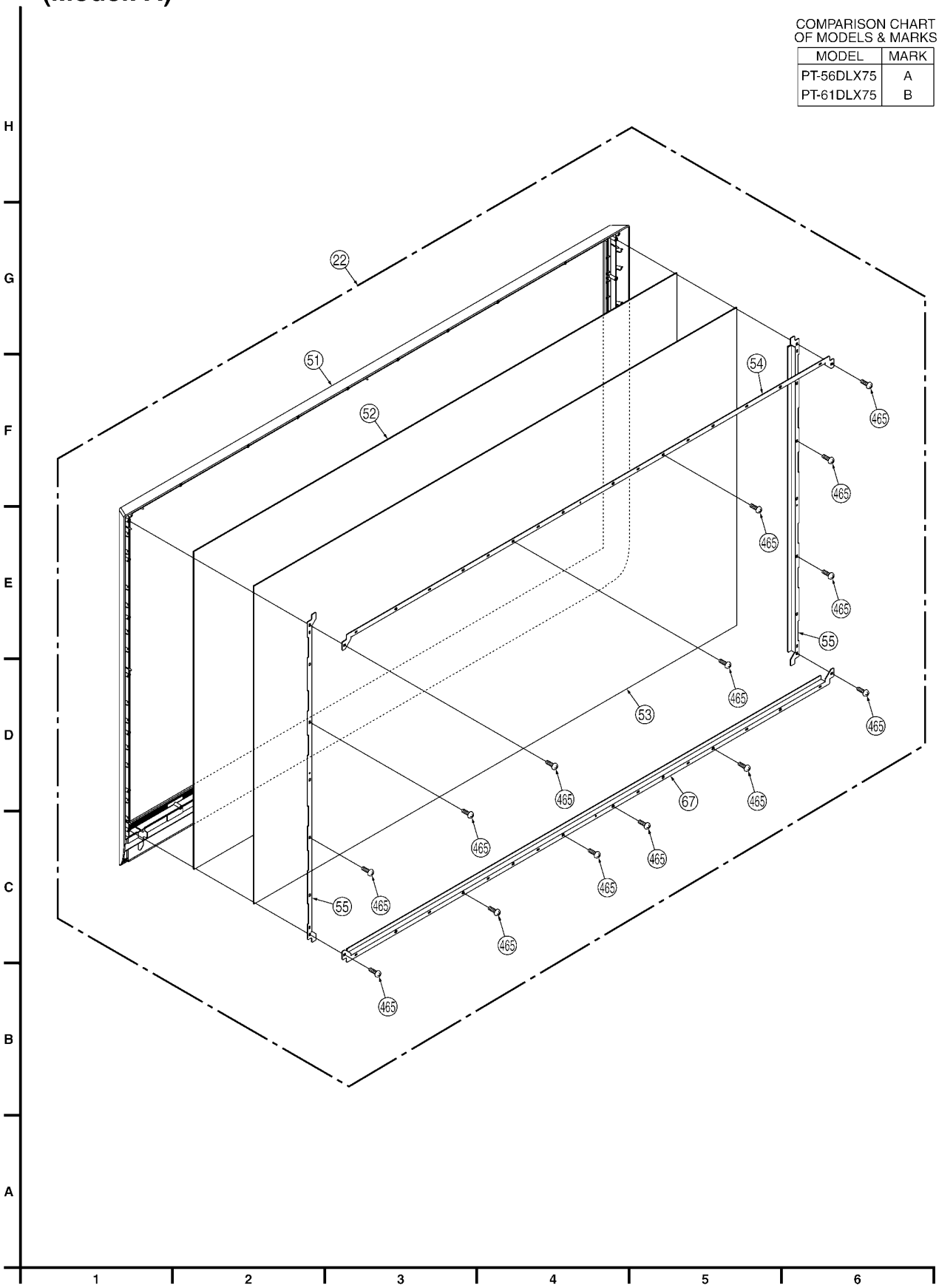


# 12.4. SCREEN SECTION

## ❹ 56 INCH SCREEN SECTION (Model: A)

COMPARISON CHART OF MODELS & MARKS

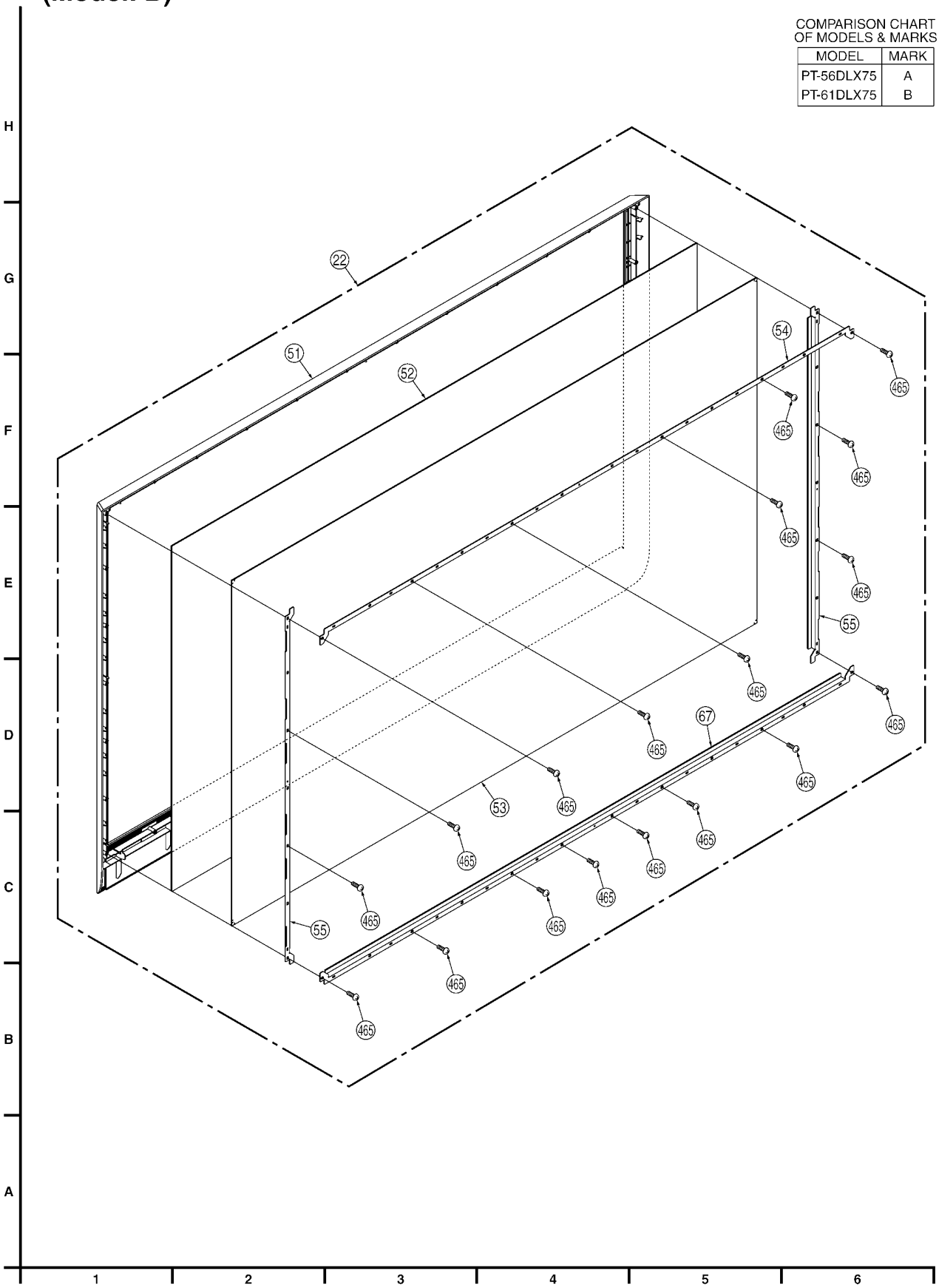
| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |



# ❹ 61 INCH SCREEN SECTION (Model: B)

COMPARISON CHART OF MODELS & MARKS

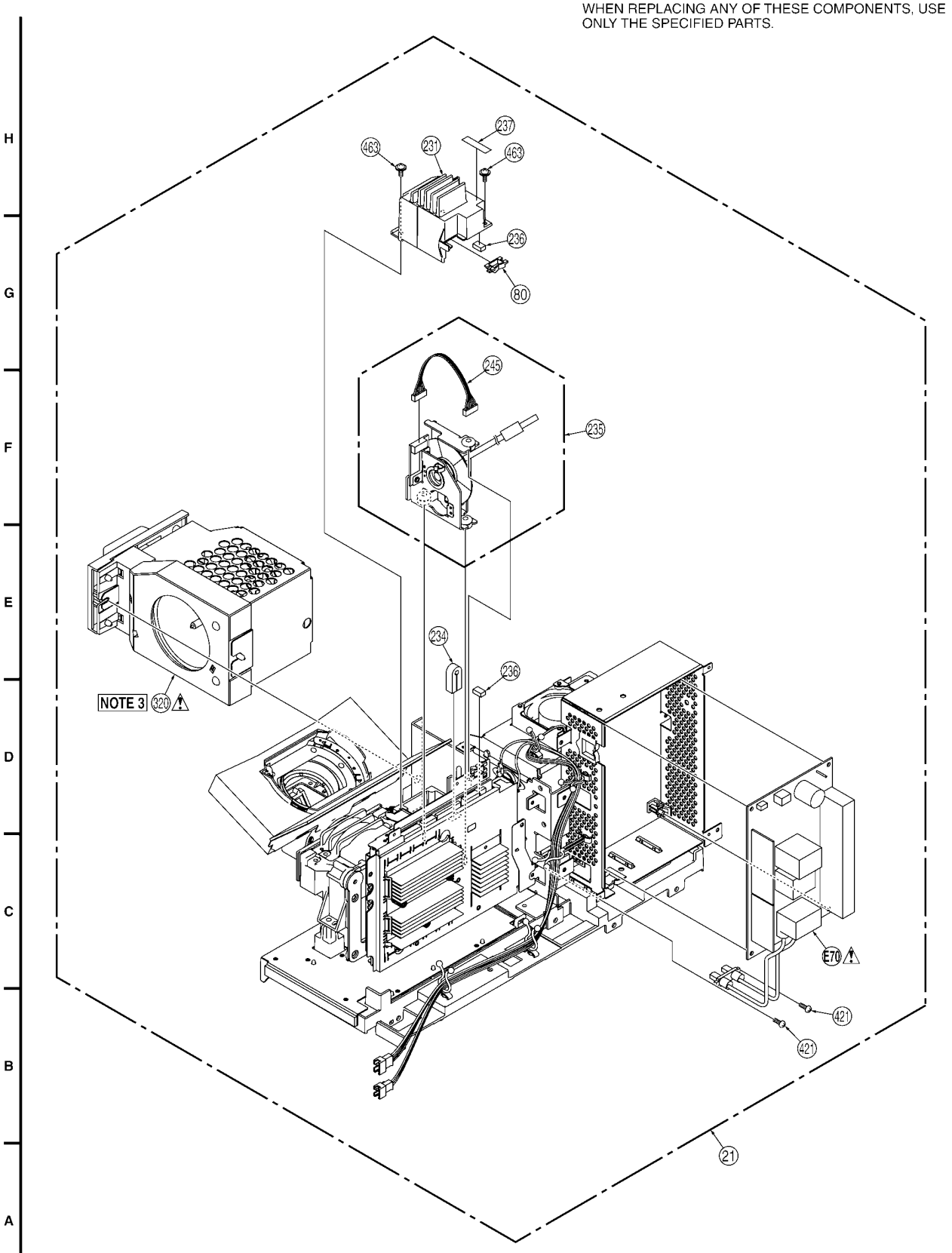
| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |



# 12.5. OPTICAL BLOCK SECTION

## ❺ OPTICAL BLOCK SECTION

**IMPORTANT SAFETY NOTICE**
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

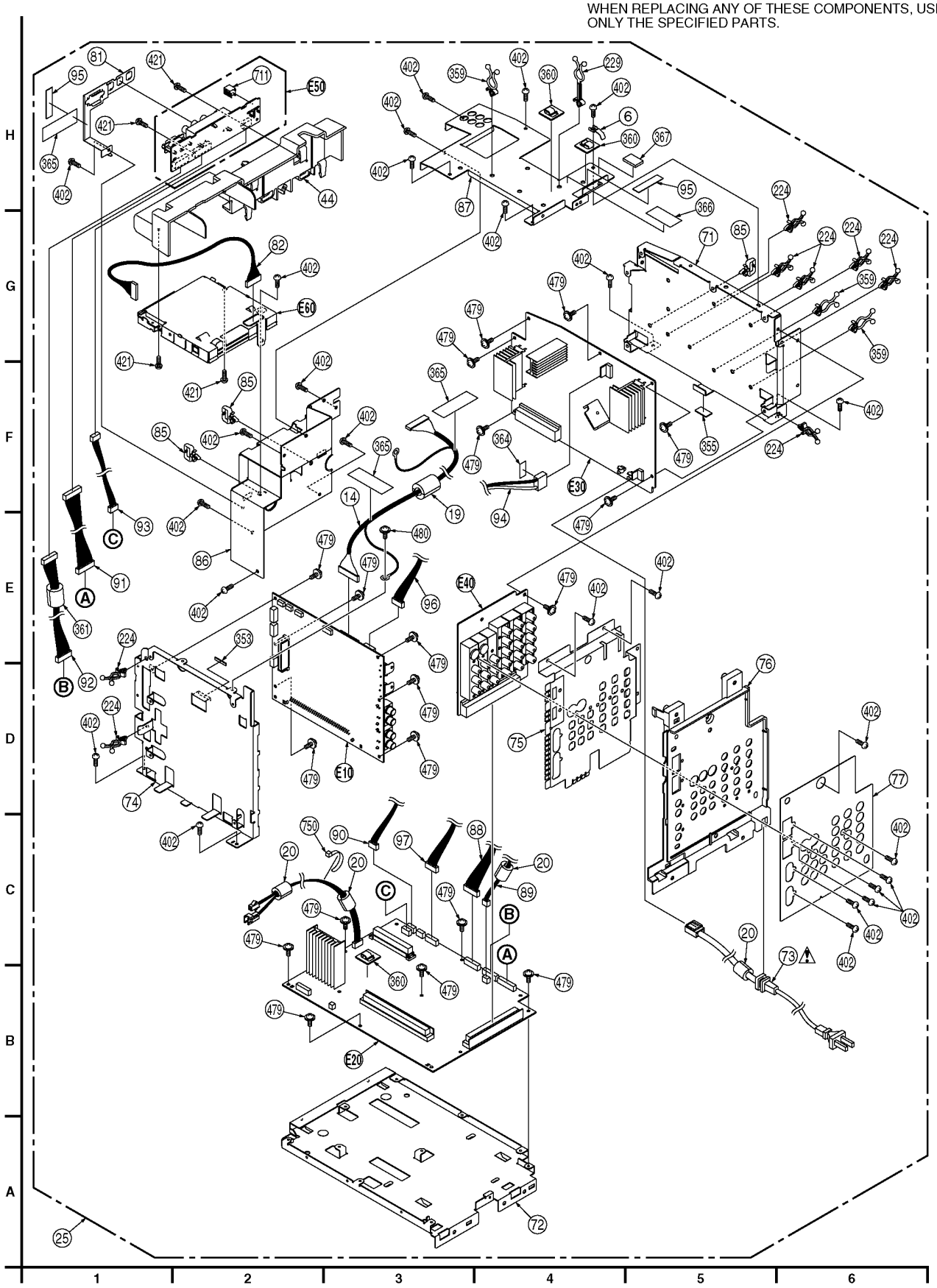



**NOTE 3**:
The Lamp Unit (TY-LA2005) is not supplied as a replacement part. It is sold separately. To purchase a replacement, call the Panasonic accessory department.

# 12.6. TV UNIT SECTION

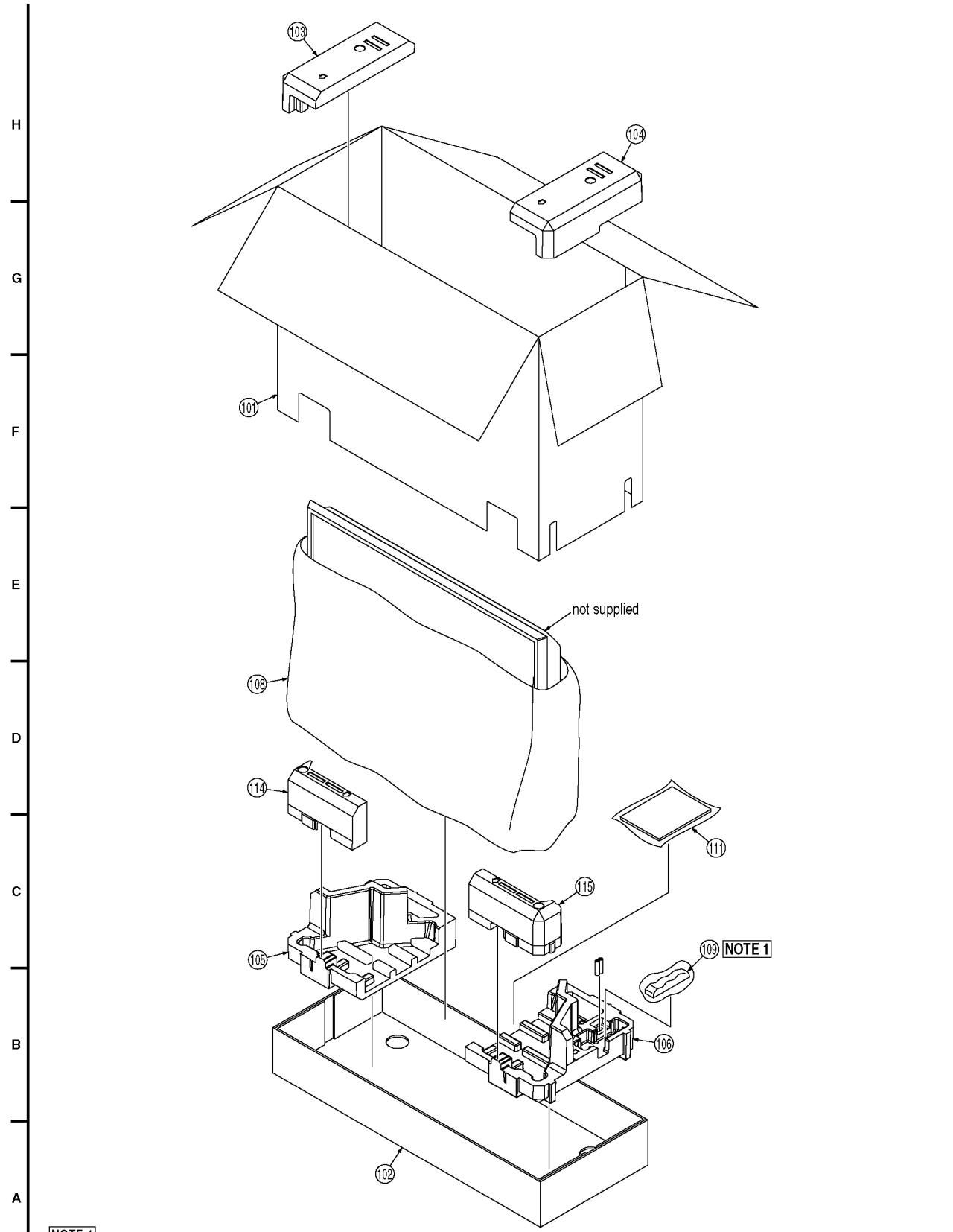
## ❻ TV UNIT SECTION

**IMPORTANT SAFETY NOTICE**
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



# 12.7. PACKING PARTS AND ACCESSORIES SECTION

## ❼ PACKING PARTS AND ACCESSORIES SECTION




NOTE 1:
The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

# 13 REPLACEMENT PARTS LIST

**BEFORE REPLACING PARTS, READ THE FOLLOWING:**

## 13.1. REPLACEMENT NOTES

### 13.1.1. General Notes

1. Use only original replacement parts:

   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

2. **IMPORTANT SAFETY NOTICE**

   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. SPECIAL NOTE

   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.

5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.

6. Definition of Parts supplier:

   a. Parts with mark "PSEC" in the Remarks column are supplied from PSEC.

   b. Parts without mark in the Remarks column are supplied from PASC-NPC.

7. Item numbers with capital letter E (Example: E10, E20,...) in the Ref. No. column are shown in the exploded views.

8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

### 13.1.2. Main Parts Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.

2. Abbreviation

   RTL: Retention Time Limited

   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.

3. After replacing the Optical Block Unit (Ref. No. 21) or the Base Body Unit (Ref. No. 40), be sure to perform "ADJUSTMENT of the Optical Block Unit." Refer to "WHEN INSTALLING THE OPTICAL BLOCK UNIT OR THE BASE BODY UNIT INTO THE UNIT AT THE USER´S LOCATION"; in ADJUSTMENT PROCEDURES 1.

4. The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

### 13.1.3. Electrical Replacement Notes

1. Unless otherwise specified;

   All resistors are in Ω, K = 1,000 Ω, M = 1,000 kΩ.

2. Abbreviation

| | |
|---|---|
| RTL: | Retention Time Limited<br>This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available. |
| NR: | Non Repairable Board Ass´y |
| MGF CHIP: | Metal Glaze Film Chip |
| C CHIP: | Ceramic Chip |
| COMPLX CMP: | Complex Component |
| W FLMPRF: | Wirewound Flameproof |
| C.B.A.: | Circuit Board Assembly |
| P.C.B.: | Printed Circuit Board |
| E.S.D.: | Electrostatically Sensitive Devices |

3. When replacing 0 Ω resistor, a wire can be substituted for it.

**COMPARISON CHART OF MODELS & MARKS**

| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |

# 13.2. MECHANICAL REPLACEMENT PARTS LIST

## COMPARISON CHART OF MODELS & MARKS

| MODEL | MARK |
|---|---|
| PT-56DLX75 | A |
| PT-61DLX75 | B |

**Definition of Parts supplier:**

1. **Parts with mark "PSEC" in the Remarks column are supplied from PSEC.**
2. **Parts without mark in the Remarks column are supplied from PASC-NPC.**

MECHANICAL REPLACEMENT PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| 1 | LSXY0883 | BASE BODY | 2 |
| 2 | LSXY0886 | EXAUST FAN UNIT | 2 |
| 5 | LSGL0427 | INFRARED PIECE | 2 |
| 6 | LSMC0124 | PANEL SPRING | 1,2,6 |
| 7 | LSKC0008 | LATCH | 1,2 |
| 8 | LSGH0055 | FRONT JACK SHEET | 2 |
| 9 | LSYF0566 | FRONT COVER UNIT ( A ) | 1 |
| 9 | LSYF0558 | FRONT COVER UNIT ( B ) | 1 |
| 10 | LSJA0543 | CONNECTOR CABLE W/PLUG | 2 |
| 11 | LSKA0030 | RUBBER FOOT | 2 |
| 12 | LSYF0563 | OPTICAL COVER UNIT | 2 |
| 13 | LSYK1618 | LAMP COVER UNIT | 2 |
| 14 | K1PB20A00021 | 20-PIN CABLE | 1,6 |
| 15 | LSMG0161 | SPACER | 2 |
| 16 | LSMG0162 | SPACER | 2 |
| 17 | LSYF0585 | REAR COVER UNIT ( A ) | 1 |
| 17 | LSYF0571 | REAR COVER UNIT ( B ) | 1 |
| 18 | LSMF0408 | SHEET | 2 |
| 19 | J0KG00000012 | FILTER FOR EMI / EMC (CORES) | 2,6 |
| 20 | J0KG00000011 | FILTER FOR EMI / EMC (CORES) | 2,6 |
| 21 | LSXA0690-HB | OPTICAL BLOCK UNIT ( A ) | 1,5 RTL PSEC |
| 21 | LSXA0691-HB | OPTICAL BLOCK UNIT ( B ) | 1,5 RTL PSEC |
| 22 | LSYK1589 | SCREEN UNIT ( A ) | 3,4 |
| 22 | LSYK1592 | SCREEN UNIT ( B ) | 3,4 |
| 23 | TMM14414 | STRIKE | 1 |
| 24 | L6FANEHH0004 | FAN 3 | 2 ⚠ |
| 25 | LSXY0910 | TV UNIT | 1,6 RTL |
| 26 | LSJA0545 | CONNECTOR CABLE W/PLUG | 2 |
| 29 | LSKF0642 | BUTTON DOOR | 1 |
| 30 | LSYY0318 | FRONT JACK DOOR UNIT | 1 |
| 31 | EAB10117AL | SPEAKER ASSEMBLY L | 2 |
| 32 | EAB10117AR | SPEAKER ASSEMBLY R | 2 |
| 33 | LSMF0407 | RUBBER SPACER | 2 |
| 34 | LSYF0567 | SIDE COVER L UNIT ( A ) | 1 |
| 34 | LSYF0560 | SIDE COVER L UNIT ( B ) | 1 |
| 35 | LSYF0568 | SIDE COVER R UNIT ( A ) | 1 |
| 35 | LSYF0562 | SIDE COVER R UNIT ( B ) | 1 |
| 36 | TMMJ058 | SPEAKER RUBBER | 2 |
| 37 | LSJH0082 | DTV JACK HOLDER | 1 |
| 38 | LSGH0058 | DTV JACK SHEET | 1 |
| 39 | LSGQ0167 | SEALING COVER | 1 |
| 40 | LSVE0013 | BASE BODY UNIT ( A ) | 1 |
| 40 | LSVE0012 | BASE BODY UNIT ( B ) | 1 |
| 41 | LSJF0013 | FRONT BUTTON HOLDER | 2 |
| 42 | LSGU0717 | OPERATION BUTTON | 2 |
| 43 | LSGL0429 | POWER LED PIECE | 2 |
| 44 | LSJH0080 | FRONT JACK HOLDER | 6 |
| 45 | LSGU0674 | POWER BUTTON | 2 |
| 46 | LSGH0056 | OPERATION SHEET | 2 |
| 47 | LSMB0314 | POWER BUTTON SPRING | 2 |
| 48 | LSMF0419 | SPACER | 2 |
| 51 | LSGY0276 | ESCUTCHEON ( A ) | 4 |
| 51 | LSGY0279 | ESCUTCHEON ( B ) | 4 |
| 52 | LSGP0502 | LENTICULAR SCREEN ( A ) | 4 |
| 52 | LSGP0472 | LENTICULAR SCREEN ( B ) | 4 |
| 53 | LSGP0501 | FRESNEL LENS ( A ) | 4 |
| 53 | LSGP0469 | FRESNEL LENS ( B ) | 4 |
| 54 | LSXA0685 | SCREEN ANGLE H UNIT ( A ) | 4 |
| 54 | LSXA0717 | SCREEN ANGLE H UNIT ( B ) | 4 |
| 55 | LSXA0684 | SCREEN ANGLE V UNIT ( A ) | 4 |
| 55 | LSXA0718 | SCREEN ANGLE V UNIT ( B ) | 4 |
| 57 | LSGV0110 | BACK COVER ( A ) | 3 |
| 57 | LSGV0099 | BACK COVER ( B ) | 3 |
| 58 | LSDL0297 | MIRROR ( A ) | 3 |
| 58 | LSDL0290 | MIRROR ( B ) | 3 |
| 59 | LSMF0393 | SPACER | 3 |
| 60 | LSMF0424 | SPACER ( A ) | 3 |
| 60 | LSMF0446 | SPACER ( B ) | 3 |
| 61 | LSGQ0145 | MIRROR HOLDER H | 3 |
| 62 | LSYF0556 | MIRROR HOLDER V UNIT | 3 |
| 64 | LSMF0417 | SPACER | 3 |
| 65 | LSMF0418 | SPACER | 3 |
| 67 | LSXA0719 | SCREEN ANGLE H UNIT ( A ) | 4 |
| 67 | LSXA0720 | SCREEN ANGLE H UNIT ( B ) | 4 |
| 69 | LSKG0072 | GRADATION PANEL ( A ) | 3 |
| 69 | LSKG0059 | GRADATION PANEL ( B ) | 3 |
| 71 | LSMA0843 | POWER BOARD MOUNT METAL | 6 |
| 72 | LSMA0842 | BASE BOARD MOUNT METAL | 6 |
| 73 | K2CB2CZ00005 | AC CORD,W/PLUG | 6 ⚠ |
| 74 | LSMA0844 | MAIN/TUNER BOARD MOUNT METAL | 6 |
| 75 | LSMA0847 | REAR AV SHIELD PLATE | 6 |
| 76 | LSJH0081 | REAR JACK HOLDER | 6 |
| 77 | LSGH0062 | REAR JACK SHEET | 6 |
| 80 | TMME075 | EDGE SADDLE | 5 |
| 81 | LSSC0774 | FRONT JACK EARTH PLATE,STEEL | 6 |
| 82 | LSJA0570 | CONNECTOR CABLE W/PLUG | 6 |
| 85 | TMM6425-1 | CLAMPER | 6 |
| 86 | LSMA0845 | FRONT SHIELD METAL | 6 |
| 87 | LSMA0846 | TOP SHIELD METAL | 6 |
| 88 | LSJA0553 | CONNECTOR CABLE W/PLUG | 6 |
| 89 | LSJA0554 | CONNECTOR CABLE W/PLUG | 6 |
| 90 | LSJA0555 | CONNECTOR CABLE W/PLUG | 6 |
| 91 | LSJA0557 | CONNECTOR CABLE W/PLUG | 6 |
| 92 | LSJA0558 | CONNECTOR CABLE W/PLUG | 6 |
| 93 | LSJA0560 | CONNECTOR CABLE W/PLUG | 6 |
| 94 | LSJA0561 | CONNECTOR CABLE W/PLUG | 6 |
| 95 | VMFS0116 | SHEET | 6 |
| 96 | LSJA0562 | CONNECTOR CABLE W/PLUG | 6 |
| 97 | LSJA0564 | CONNECTOR CABLE W/PLUG | 6 |
| 101 | LSPG2016 | CARTON BOX ( A ) | 7 |
| 101 | LSPG2017 | CARTON BOX ( B ) | 7 |
| 102 | LSPG2018 | CARTON BOX BOTTOM ( A ) | 7 |
| 102 | LSPG1968 | CARTON BOX BOTTOM ( B ) | 7 |
| 103 | LSPN0606 | CUSHION TOP-LEFT,STYROFOAM ( A ) | 7 |
| 103 | LSPN0581 | CUSHION TOP-LEFT,STYROFOAM ( B ) | 7 |
| 104 | LSPN0607 | CUSHION TOP-RIGHT,STYROFOAM ( A ) | 7 |
| 104 | LSPN0582 | CUSHION TOP-RIGHT,STYROFOAM ( B ) | 7 |
| 105 | LSPN0608 | CUSHION BOTTOM-LEFT,STYROFOAM ( A ) | 7 |
| 105 | LSPN0583 | CUSHION BOTTOM-LEFT,STYROFOAM ( B ) | 7 |
| 106 | LSPN0609 | CUSHION BOTTOM-RIGHT,STYROFOAM ( A ) | 7 |
| 106 | LSPN0584 | CUSHION BOTTOM-RIGHT,STYROFOAM ( B ) | 7 |
| 108 | LSPF0111 | BAG,POLYETHYLENE | 7 |
| 109 | EUR7627Z70 | INFRARED REMOTE CONTROL UNIT | 7 |
| 111 | LSQF0959I | FAN BAG | 7 |
| 114 | LSPN0588 | CUSHION FRONT-LEFT,STYROFOAM | 7 |
| 115 | LSPN0589 | CUSHION FRONT-RIGHT,STYROFOAM | 7 |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| 224 | TMME047 | CLAMPER | 1,6 |
| 229 | TMM16452 | CLAMPER | 6 |
| 231 | LSMK0860 | OPTICAL CHASSIS CW COVER | 5 |
| 234 | LSMF0409 | CW SPONGE | 5 |
| 235 | LSXF0540 | COLOR WHEEL UNIT | 5 |
| 236 | LSMF0410 | SPONGE | 5 |
| 237 | LSMF0305 | SPACER | 5 |
| 245 | LSJA0563 | CONNECTOR CABLE W/PLUG | 5 |
| 341 | L6FAKCDH0010 | FAN 1 | 1 ⚠ |
| 342 | LSMA0849 | REAR SHIELD PLATE | 1 |
| 343 | LSMA0850 | DMD DRIVE PCB EARTH PLATE | 1 |
| 344 | LSMF0432 | CUSHION | 1 |
| 346 | LSGQ0166 | SHADING COVER | 2 |
| 347 | LSMT0414 | SHEET | 2 |
| 353 | LSMF0450 | CUSHION | 6 |
| 355 | LSMF0452 | CUSHION | 6 |
| 358 | J0KG00000014 | FILTER FOR EMI / EMC (CORES) | 1 |
| 359 | LSGQ0176 | CLAMPER | 6 |
| 360 | LSGQ0178 | CLAMPER | 6 |
| 361 | J0KG00000034 | FERRITE CORE | 6 |
| 362 | LSMF0469 | SHEET | 1 |
| 363 | LSMF0329 | SHEET | 2 |
| 364 | LSMF0294 | SHEET | 6 |
| 365 | LSGQ0179 | AL TAPE | 1,6 |
| 366 | LSGQ0187 | AL TAPE | 6 |
| 367 | LSMF0483 | SHEET | 6 |
| 368 | LSMF0435 | SHEET | 1 |
| 369 | LSGQ0188 | AL TAPE | 1 |
| 401 | XTV4+16AFJ | TAPPING SCREW,STEEL | 1,2,3 |
| 402 | XTV3+8JFJ | TAPPING SCREW,STEEL | 1,6 |
| 421 | XTV3+8GFJ | TAPPING SCREW,STEEL | 2,5,6 |
| 435 | XTV3+20JFJ | TAPPING SCREW,STEEL | 1 |
| 454 | XTV4+16AFJK | TAPPING SCREW,STEEL | 1 |
| 463 | XYN3+F12FJ | SCREW W/WASHER,STEEL | 5 |
| 465 | XTV4+12AFJ | TAPPING SCREW,STEEL | 4 |
| 478 | LSHD0099-FJ | SCREW,STEEL | 2 |
| 479 | XYE3+FJ8FJ | SCREW W/WASHER,STEEL | 6 |
| 480 | XTW3+8TFJ | TAPPING SCREW,STEEL | 1,6 |
| 481 | XTV3+35GFJ | TAPPING SCREW,STEEL | 2 |
| 482 | XYN3+J8FJ | SCREW W/WASHER,STEEL | 1 |
| 489 | XWA4BV | SPRING WASHER,STEEL | 1 |
| 711 | PNA4701M00HB | INFRARED RECEIVER UNIT | 6 |
| 750 | VZFS0006 | CLAMPER | 1,2,6 |
| E10 | LSEP3172A | MAIN C.B.A. (CIRCUIT BOARD DG) | 6 RTL |
| E20 | LSEP3174A | BASE C.B.A. (CIRCUIT BOARD A) | 6 RTL |
| E30 | LSEP3171A | POWER C.B.A. (CIRCUIT BOARD P) | 6 RTL |
| E40 | LSEP3154B | REAR JACK C.B.A. | 6 RTL |
| E50 | LSEP3187A | FRONT JACK C.B.A. (CIRCUIT BOARD FJ) | 6 RTL |
| E60 | LSEB3161A | CARD C.B.A. | 6 RTL |
| E70 | EUBMM021A10A | BALLAST C.B.A. NR | 5 ⚠ |
| E80 | LSEP3156A | OPERATION C.B.A. | 2 RTL |
| E100 | LSXY0894 | DIGITAL TUNER C.B.A. (CIRCUIT BOARD DT) | 1 RTL |

# 13.3. OPTIONAL ACCESSORY REPLACEMENT PARTS LIST

## 13.3.1. LAMP UNIT

| Ref. No.2 | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| 320 | TY-LA2005 | LAMP UNIT | ⚠ NOTE |

**NOTE:**

The Lamp Unit (TY-LA2005) is not supplied as a replacement part. It is sold separately. To purchase a replacement, call the Panasonic accessory department.

# 13.4. ELECTRICAL REPLACEMENT PARTS LIST

**Definition of Parts supplier:**

1. **All parts are supplied from PASC-NPC.**

PRINTED CIRCUIT BOARD ASSEMBLY

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| E10 | LSEP3172A | MAIN C.B.A. (CIRCUIT BOARD DG) | RTL E.S.D. |
| E20 | LSEP3174A | BASE C.B.A. (CIRCUIT BOARD A) | RTL |
| E30 | LSEP3171A | POWER C.B.A. (CIRCUIT BOARD P) | RTL |
| E40 | LSEP3154B | REAR JACK C.B.A. | RTL |
| E50 | LSEP3187A | FRONT JACK C.B.A. (CIRCUIT BOARD FJ) | RTL |
| E60 | LSEB3161A | CARD C.B.A. | RTL |
| E70 | EUBMM021A10A | BALLAST C.B.A. NR | ⚠ |
| E80 | LSEP3156A | OPERATION C.B.A. | RTL |
| E100 | LSXY0894 | DIGITAL TUNER C.B.A. (CIRCUIT BOARD DT) | RTL E.S.D. |

## 13.4.1. FRONT JACK C.B.A. (CIRCUIT BOARD FJ)

TRANSISTORS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| Q3901 | 2SD1819A0L | TRANSISTOR SI NPN CHIP | |
| or Q3901 | B1ABCF000020 | TRANSISTOR SI NPN CHIP | |
| Q3902 | 2SD1819A0L | TRANSISTOR SI NPN CHIP | |
| or Q3902 | B1ABCF000020 | TRANSISTOR SI NPN CHIP | |

DIODES

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| D3901 | B0BD6R200004 | DIODE ZENER CHIP 6.2V | |
| D3902 | B3AAA0000538 | LIGHT EMITTING DIODE RED | |
| D3903 | B3AAA0000538 | LIGHT EMITTING DIODE RED | |

RESISTORS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R3904 | ERJ3GEYJ101V | MGF CHIP 1/16W 100 | |
| R3905 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R3906 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R3907 | ERJ3GEYJ471V | MGF CHIP 1/16W 470 | |
| R3908 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R3909 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R3910 | ERJ3GEYJ471V | MGF CHIP 1/16W 470 | |
| R3911 | ERJ3GEYJ750V | MGF CHIP 1/16W 75 | |
| R3912 | ERJ3GEYJ750V | MGF CHIP 1/16W 75 | |
| R3913 | ERJ3GEYJ750V | MGF CHIP 1/16W 75 | |
| R3914 | ERJ3GEYJ101V | MGF CHIP 1/16W 100 | |

CAPACITORS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C3901 | F2A0J4700014 | ELECTROLYTIC 6.3V 47UF | |

COILS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| L3901 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3902 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3903 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3904 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3905 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3906 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3907 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3908 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L3909 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L4801 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |
| L4802 | ERJ3GEY0R00V | MGF CHIP 1/16W 0 | |

PIN HEADERS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| P3901 | K1KA10BA0062 | CONNECTOR 10P | |
| P3902 | K1KA12BA0062 | CONNECTOR 12P | |
| P3903 | K1KA05BA0061 | CONNECTOR 5P | |

JACKS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| JK3901 | K1FB115A0015 | D-SUB MINI JACK SOCKET | |
| JK3902 | K1U412A00008 | AUDIO/VIDEO/S-VIDEO JACK SOCKET | |

MISCELLANEOUS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| 711 | PNA4701M00HB | INFRARED RECEIVER UNIT | |

## 13.4.2. OPERATION C.B.A.

TRANSISTORS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| Q6701 | 2SB1218A0L | TRANSISTOR SI PNP CHIP | |
| or Q6701 | B1ADCF000063 | TRANSISTOR SI PNP CHIP | |
| or Q6701 | B1ADCF000075 | TRANSISTOR SI PNP CHIP | |
| Q6702 | 2SB1218A0L | TRANSISTOR SI PNP CHIP | |
| or Q6702 | B1ADCF000063 | TRANSISTOR SI PNP CHIP | |
| or Q6702 | B1ADCF000075 | TRANSISTOR SI PNP CHIP | |

DIODES

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| D6701 | B3AGA0000072 | LIGHT EMITTING DIODE GREEN | |

RESISTORS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R6702 | ERJ3GEYJ122V | MGF CHIP 1/16W 1.2K | |
| R6703 | ERJ3GEYJ152V | MGF CHIP 1/16W 1.5K | |
| R6704 | ERJ3GEYJ272V | MGF CHIP 1/16W 2.7K | |
| R6705 | ERJ3GEYJ562V | MGF CHIP 1/16W 5.6K | |
| R6706 | ERJ3GEYJ183V | MGF CHIP 1/16W 18K | |
| R6707 | ERJ3GEYJ122V | MGF CHIP 1/16W 1.2K | |
| R6708 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R6709 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R6710 | ERJ3GEYJ181V | MGF CHIP 1/16W 180 | |
| R6711 | ERJ3GEYJ101V | MGF CHIP 1/16W 100 | |
| R6712 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |
| R6713 | ERJ3GEYJ103V | MGF CHIP 1/16W 10K | |

PIN HEADERS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| P6701 | K1KA07BA0061 | CONNECTOR 7P | |

SWITCHES

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| SW6701 | EVQ11G05R | SWITCH PUSH | |
| SW6702 | EVQ11G05R | SWITCH PUSH | |
| SW6703 | EVQ11G05R | SWITCH PUSH | |
| SW6704 | EVQ11G05R | SWITCH PUSH | |
| SW6705 | EVQ11G05R | SWITCH PUSH | |
| SW6706 | EVQ11G05R | SWITCH PUSH | |
| SW6707 | EVQ11G05R | SWITCH PUSH | |
| SW6708 | EVQ11G05R | SWITCH PUSH | |